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Pathways to Sustainable Living *and* Positive Solutions



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with Bill
Mollison

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speak about
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Permaculture: *A Quiet Revolution*

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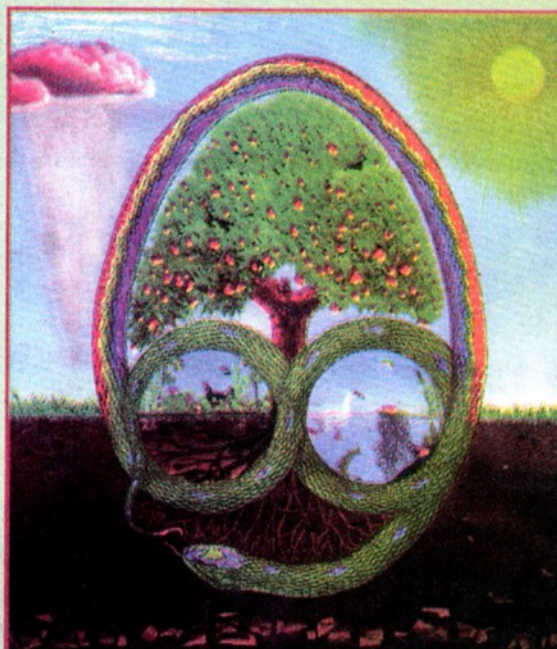
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The following explanation of the front cover is an extract from *Permaculture - A Designer's Manual*, the definitive Permaculture text, by Bill Mollison, illustrated by Andrew Jeeves, manuscript edited Reny Mia Slay.

"The great oval of the design represents the egg of life; that quantity of life which cannot be created or destroyed, but from within which all things that live are expressed. Within the egg is coiled the rainbow snake, the Earth-shaper of Australian & American aboriginal peoples...."

Within the body of the Rainbow Serpent is contained the Tree of Life, which itself expresses the general pattern of life forms, as further elaborated in the chapter on pattern in this book. Its roots are in earth, & its crown in rain sunlight & wind. Elemental forces & flows shown external to the oval represent the physical environment, the sun & the matter of the universe; the materials from which life on earth is formed. The whole cycle & form is

dedicated, as is this book, to the complexity of life on Earth." "This logo is a registered trademark of Bill Mollison's Permaculture Institute in Australia and is used here with permission." Contact the PERMACULTURE INSTITUTE at tagariadmin@southcom.com.au.

MISSION STATEMENT:

The purpose of *HopeDance Magazine* is to report on the inspiring activities of creative, pioneering and outrageous individuals and organizations (regardless of their spiritual tradition or political agenda) that questions basic assumptions of consensus reality as well as truly "making a difference." We publish material that explores real alternatives to our current planetary crisis. We promote activities that are necessary in building an ecologically sustainable, holistic, healthy and awakened community. Inspiring genuine hope, our intention is to also help connect and network people to specific projects, individuals and organizations so that dialogue, wisdom and vital action will be the fruitful outcome for the people, plants, animals and land in California... and beyond.

Quotes about PERMACULTURE

"What permaculturists are doing is the most important activity that any group is doing on the planet. We don't know what details of a truly sustainable future are going to be like, but we need options, we need people experimenting in all kinds of ways and permaculturists are one of the critical gangs that are doing that."

— *Dr. David Suzuki, geneticist, broadcaster and international environmental advocate*

"Permaculture is also a world wide network and movement of individuals and groups working in both rich and poor countries on all continents. Largely unsupported by government or business, these people are contributing to a sustainable future by reorganizing their life and work around permaculture design principles. In this way they are creating small local changes but ones which are directly and indirectly influencing action in the wider environment, organic agriculture, appropriate technology, communities and other movements for a sustainable world. After 20 years Permaculture may rank as one of Australia's most significant 'intellectual exports'." — *David Holmgren*

"Permaculture is revolution disguised as gardening." — *Mike Feingold, a Permaculture Teacher at Findhorn*

"Permaculture, a design system that reconciles human communities with the ecological imperatives of a living planet."

— *Ben Haggard*

"Permaculture is a design system for creating sustainable human environments. The word itself is a contraction not only of permanent and agriculture but also of permanent culture, as cultures cannot survive for long without a sustainable agricultural base and landuse ethic. On one level, permaculture deals with plants, animals, buildings, and infrastructures (water, energy, communications). However, permaculture is not about these elements themselves, but rather about the relationships we can create between them by the way we place them in the landscape.

The aim is to create systems that are ecologically sound and economically viable, which provide for their own needs, do not exploit or pollute, and are therefore sustainable in the long term. Permaculture uses the inherent qualities of plants and animals combined with the natural characteristics of landscapes and structures to produce a life-supporting system for city and country, using the smallest practical area.

Permaculture is based on the observation of natural systems, the wisdom contained in traditional farming systems, and modern scientific and technological knowledge. Although based on good ecological models, permaculture creates a cultivated ecology, which is designed to produce more human and animal food than is generally found in nature."

— *from Introduction to Permaculture by Bill Mollison*

in this issue...



Toby Hemenway, who journeyed along the west

coast this past

month giving talks about permaculture, the home garden type, takes a twist and writes about "Zone Zero," ourselves, and how we need to work on ourselves so that our passionate messages can be heard and felt by more people (p.19). **Ben Haggard** writes that sustainable development is not necessarily an oxymoron. Builders and designers and architects can come together using permaculture and sustainable design concerns and make it happen (see p.17). Personal stories begin on page 24.

Patch Adams and **Susan Parenti** talk about using permaculture ethics in "Designing Care" (p. 27).

"Permaculture Principles as illustrated by the Permaculture Tree" by **David Holmgren** is an excerpt from his newest book (see p.66). And if we are committed to changing the world, restoring the planet with good design, what do we do with our money, that blood that can fuel such projects? **Vint Lawrence** writes about the Permaculture Credit Union on page 26. A short report on the recent Bioneers Conference is on page 65. Plus we have a new section for the Santa Cruz County area. Editor, distributor and permaculturalist **Kevin Snorf** (and his cohorts) give us many examples of sustainable projects in this premier offering (see p.51). **Larry Santoyo** (see his column on p. 42) will speak after the upcoming film about Bill Mollison (see ad on p.16).

More copies of "Voices..." are still available. Give us a call for details, 805-544-9663. (Subscribers: Contact us if you failed to receive this issue in the mail.) And another big *thank you* for the generous donors (and the writers, distributors, editors...) who came through so we could print 20,000 copies of the special supplement and distribute them freely from Santa Cruz to Ojai. And please support our advertisers since they support us. ○

Bob Banner, Publisher

Corrections: The piece of art that was on the front cover of the Special Supplement was by William Blake. The art by Donna Kandel of the labyrinth design on p.22 was mistakenly used. It is copyrighted art and should not be reproduced in any form or be used without permission from the artist.

The current crisis is waking people up to the US's foreign policies, to its eagerness to use the grotesque arsenals of death, and its increasing attacks on our civil liberties. Some of us are courageous enough to look history and truth in the face in order to come up with genuine answers, not simple platitudes based on a blind patriotism. Some have been deeply affected by wars, inequities, natural resource overconsumption and depletion, and the growing power of transnational corporations chipping away at democratic policies. Some have turned their lives around to become the paradigm-shift that we need. Some have become warriors of a different sort. The people portrayed in this special issue are the new type of warriors. They have been deeply affected by the world's suffering for a long time. They have deeply searched for answers that get to the root of our dilemma. They have turned "protest against inequities" into a livelihood where joy, peace and fecundity are in abundance. This is our next step. This is our new vision... and this is the time for all of us to become acquainted with the world of Permaculture: a quiet revolution, or as Bill Mollison calls it, "a peaceful sedition."

Even though the ethics, principles, morals and sustainable systems have been practiced for thousands of years, it wasn't until Bill Mollison put it all together that the movement of ecological design and sustainable food forestry took a quantum leap. Occasionally we published material about permaculture, but this issue ties it all together.

Wes Roe and **Margie Bushman** are the main conspirators behind this effort. They have succeeded in gathering/harvesting the cream of the crop when it comes to permaculture news, analyses, resources and outright fun and inspiring stories.

We have **Scott London's** thought provoking interview with the man himself, **Bill Mollison** (see p.8). We have a condensed summary of the brightest answers from the permaculture teachers themselves speaking about their own livelihood (see p.13). We have stories about how permaculture is being done, how it's being taught (since it is all over the globe), where its being taught and where it's being practiced both locally and globally.

Interview with **Bill Mollison**

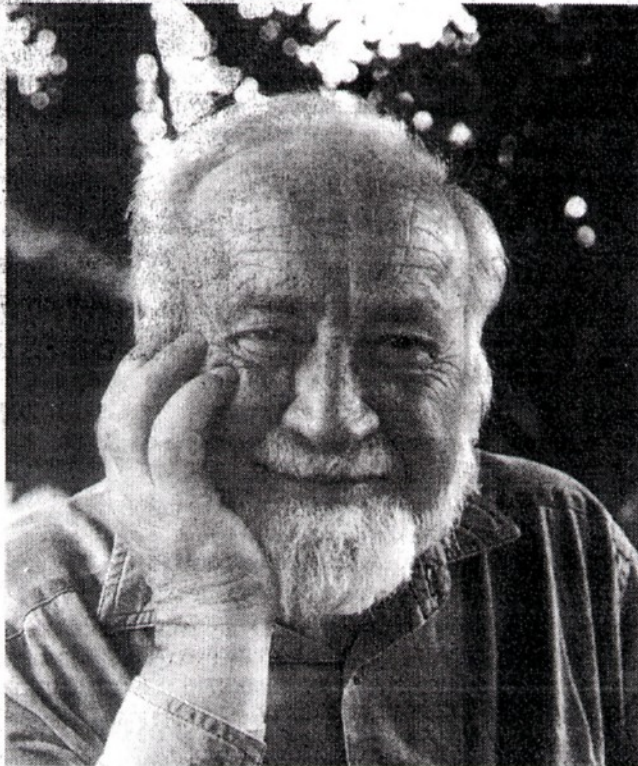
Permaculture: A Quiet Revolution

An Interview with Bill Mollison By Scott London

The ethics are simple: Care of the earth, care of people, and reinvestment in those ends. Renowned Australian biologist and founder of permaculture talks with Scott London about his revolutionary approach to food production and ecological design.

Bill Mollison calls himself a field biologist and itinerant teacher. But it would be more accurate to describe him as an instigator. When he published *Permaculture One* in 1978, he launched an international land-use movement many regard as subversive, even revolutionary.

Permaculture — from permanent and agriculture — is an integrated design philosophy that encompasses gardening, architecture, horticulture, ecology, even money management and community design. The basic approach is to create sustainable systems



that provide for their own needs and recycle their waste.

Mollison developed permaculture after spending decades in the rainforests and deserts of Australia studying ecosystems. He observed that plants naturally group themselves in mutually beneficial communities. He used this idea to develop a different approach to agriculture and community design, one that seeks to place the right elements

together so they sustain and support each other.

Today his ideas have spread and taken root in almost every country on the globe.

Permaculture is now being practiced in the rainforests of South America, in the Kalahari desert, in the arctic north of Scandinavia, and in communities all over North America. In New Mexico, for example, farmers have used permaculture to transform hard-packed dirt lots into lush gardens and tree orchards without using any heavy machinery. In Davis, California, one community uses bath and laundry water to flush toilets and irrigate gardens. In Toronto, a team of architects has created a design for an urban infill house that doesn't

tap into city water or sewage infrastructure and that costs only a few hundred dollars a year to operate.

While Mollison is still unknown to most Americans, he is a national icon down under. He has been named Australia's "Man of the Year" and in 1981 he received the prestigious Right Livelihood Award, also known as the Alternative Nobel Prize, for his work developing and promoting permaculture.

I sat down with him to discuss his innovative design philosophy. We met over the course of two afternoons in Santa Barbara in conjunction with an intensive two-week Permaculture

Renowned Australian biologist and founder of permaculture talks with Scott London about his revolutionary approach to food production and ecological design.

Design course given in Ojai in 1997. A short, round man with a white goatee and a big smile, he is one of the most affable and good-natured people I've met. An inveterate raconteur, he seems to have a story — or a bad joke — for every occasion. Almost every remark he makes is punctuated by a hearty and infectious laugh.

SCOTT LONDON: A reviewer once described your teachings as "seditious."

BILL MOLLISON: Yes, it was very perceptive. I teach self-reliance, the world's most subversive practice. I teach people how to grow their own food, which is shockingly subversive. So, yes, it's seditious. But it's peaceful sedition.

LONDON: When did you begin teaching permaculture?

MOLLISON: In the early 1970s, it dawned on me that no one had ever applied design to agriculture. When I realized it, the hairs went up on the back of my neck. It was so strange. We'd had agriculture for 7,000 years, and we'd been losing for 7,000 years — everything was turning into desert. So I wondered, can we build systems that obey ecological principles? We know what they are, we just never apply them. Ecologists never apply good ecology to their gardens. Architects never understand the transmission of heat in buildings. And physicists live in houses with demented energy systems. It's curious that we never apply what we know to how we actually live.

LONDON: It tells us something about our current environmental problems.

MOLLISON: It does. I remember the Club of Rome report in 1967 which said that the deterioration of the environment was inevitable due to population growth and overconsumption of resources. After reading that, I thought, "People are so stupid and so

destructive — we can do nothing for them." So I withdrew from society. I thought I would leave and just sit on a hill and watch it collapse.

It took me about three weeks before I realized that I had to get back and fight. [Laughs] You know, you have to get out in order to want to get back in.

LONDON: Is that when the idea of permaculture was born?

MOLLISON: It actually goes back to 1959. I was in the Tasmanian rain forest studying the interaction between browsing marsupials and forest regeneration. We weren't having a lot of success regenerating forests with a big marsupial population. So I created a simple system with 23 woody plant species, of which only four were dominant, and only two real browsing marsupials. It was a very flexible system based on the interactions of components, not types of species. It occurred to me one evening that we could build systems that worked better than that one.

That was a remarkable revelation. Ever so often in your life — perhaps once a decade — you have a revelation. If you are an aborigine, that defines your age. You only have a revelation once every age, no matter what your chronological age. If you're lucky, you have three good revelations in a lifetime.

Because I was an educator, I realized that if I didn't teach it, it wouldn't go anywhere. So I started to develop design instructions based on passive knowledge and I wrote a book about it called *Permaculture One* [co-authored by David Holmgren]. To my horror,

everybody was interested in it. [Laughs] I got thousands of letters saying, "You've articulated something that I've had in my mind for years," and "You've put something into my hands which I can use."

LONDON:

Permaculture is based on scientific principles and research. But it seems to me that it also draws on traditional and indigenous folk wisdom.

MOLLISON:

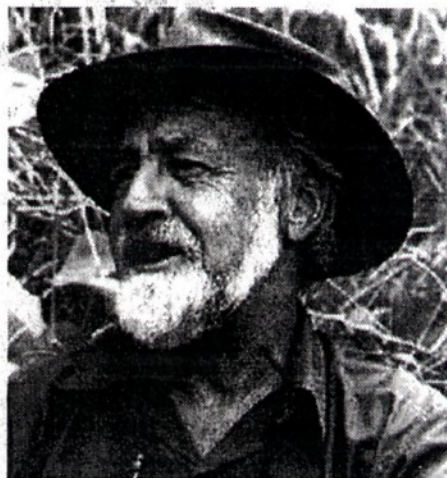
Well, if I go to an old Greek lady sitting in a vineyard and ask, "Why have you

planted roses among your grapes?" she will say to me, "Because the rose is the doctor of the grape. If you don't plant roses, the grapes get ill." That doesn't do me a lot of good. But if I can find out that the rose exudes a certain root chemical that is taken up by the grape root which in turn repels the white fly (which is the scientific way of saying the same thing), then I have something very useful.

Traditional knowledge is always of that nature. I know a Filipino man who always plants a chili and four beans in the same hole as the banana root. I asked him, "Why do you plant a chili with the banana?" And he said, "Don't you know that you must always plant these things together." Well, I worked out that the beans fix the nitrogen and the chili prevents beetles from attacking the banana root. And that works very well.

LONDON: You have introduced permaculture in places that still rely on traditional farming practices. Have they been receptive to your ideas?

MOLLISON: I have a terribly tricky way of approaching indigenous



tribal people. For example, I'll go to the Central Desert, where everyone is half-starved, and say, "I wonder if I can help you." And I'll lie and say, "I don't know how to do this!" And they say, "Oh, come on, we'll make it work." By the time it's done, they have done it themselves.

I remember going back to a school we started in Zimbabwe. It's green and surrounded by food. The temperature in the classroom is controlled. I asked them, "Who did this?" They said, "We did!" When people do it for themselves, they are proud of it.

LONDON: For some people — particularly indigenous tribes — the notion that you can grow your own food is revolutionary.

MOLLISON: When you grow up in a world where you have a very minor effect on the land, you don't think of creating resources for yourself. What falls on the ground you eat. And your numbers are governed by what falls on the ground. Permaculture allows you to think differently because you can grow everything that you need very easily.

For example, the bushmen of the Kalahari have a native bean called the morama bean. It is a perennial that grows underground and spreads out when it rains. They used to go out and collect it. But after they were pushed off their lands to make room for game and natural parks the morama bean was hard to find. I asked them, "Why don't you plant them here?" They said, "Do you think we could?" So we planted the bean in their gardens. Up to that point, they never actually thought of planting something. It stunned them that they could actually do that.

The same thing happened with the mongongo tree which grows on the top of sand dunes. They had never actually moved the tree from one dune to another. But I went and cut a branch off the mother tree and stuck it in the sand. The thing started to sprout leaves and produce mongongo nuts. Now they grow the trees wherever they want.

LONDON: You once described modern technological agriculture as a form of "witchcraft."

MOLLISON: Well, it is a sort of witchcraft. Today we have more soil scientists than at any other time in history. If you plot the rise of soil scientists against the loss of soil, you see that the more of them you have, the more soil you lose.

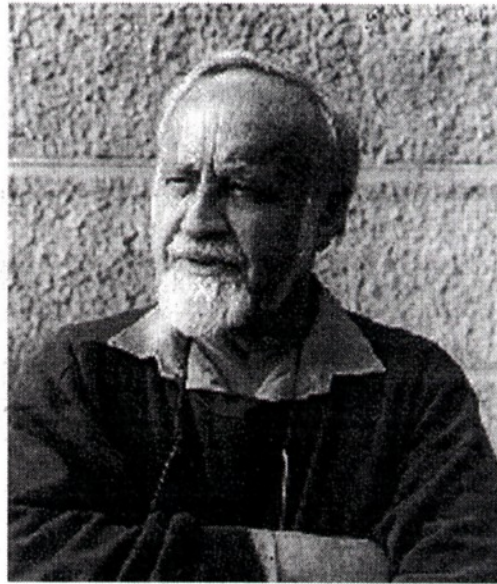
I remember seeing soldiers returning from the War in 1947. They had these little steel canisters with a snap-off top. When they snapped the tops off, they sprayed DDT all over the room so you never saw any more flies or mosquitoes — or cats. [Laughs] After the war, they started to use those chemicals in agriculture. The gases used by the Nazis were now developed for agriculture. Tanks were made into plows. Part of the reason for the huge surge in artificial fertilizer was that the industry was geared up to produce nitrates for explosives. Then they suddenly discovered you could put it on your crops and get great results.

LONDON: So the green revolution was a kind of war against the land, in a manner of speaking.

MOLLISON: That's right. Governments still support this kind of agriculture to the tune of about \$40 billion each year. None of that goes to supporting alternative systems like organic or soil-creating agriculture. Even China is adopting modern chemical agriculture now.

LONDON: I remember the late economist Robert Theobald saying to me that if China decides to go the way of the West, the environmental ballgame is over.

MOLLISON: I overheard two "Eurocrats" in Vienna talking about the environment. One said, "How long do you think we've got?" The other said, "Ten years." And the first one said, "You're an optimist." So I said to them, "If China begins to develop motor vehicles, we've got two years."



LONDON:

What kind of overconsumption bothers you the most?

MOLLISON: I hate lawns. Subconsciously I think we all hate them because we're their slaves. Imagine the millions of people who get on their lawn-mowers and ride around in circles every Saturday and Sunday.

They have all these new subdivisions in Australia which are between one and five acres. You see people coming home from work on Friday, getting on their little ride-on mowers, and mowing all weekend. On Monday morning you can drive through these areas and see all these mowers halfway across the five acres, waiting for the next Friday. Like idiots, we spend all our spare time driving these crazy machines, cutting grass which is only going to grow back again next week.

LONDON: Permaculture teaches us how to use the minimum amount of energy needed to get a job done.

MOLLISON: That's right. Every

house should be over-producing its energy and selling to the grid. We have built entire villages that do that — where one or two buildings hold the solar panels for all sixty homes and sell the surplus to the grid. In seven years, you can pay off all your expenses and run free. They use this same idea in Denmark. Every village there has a windmill that can fuel up to 800 homes.

LONDON: The same principle probably applies to human energy as well. I noticed that you discourage digging in gardens because it requires energy that can be better used for other things.

MOLLISON: Well, some people like digging. It's a bit like having an exercise bike in your bedroom. But I prefer to leave it to the worms. They do a great job. I've created fantastic soil just from mulching.

LONDON: Does permaculture apply to those of us who live in cities?

MOLLISON: Yes, there is a whole section in the manual about urban permaculture. When I first went to New York, I helped start a little herb-farm in the South Bronx. The land was very cheap there because there was no power, no water, no police, and there were tons of drugs. This little farm grew to supply eight percent of New York's herbs. There are now 1,100 city farms

in New York.

LONDON: Short of starting a farm, what can we do to make our cities more sustainable?

MOLLISON: Catch the water off your roof. Grow your own food. Make your own energy. It's insanely easy to do all that. It takes you less time to grow your food than to walk down to the supermarket to buy it. Ask any good organic gardener who mulches how much time he spends on his garden and he'll say, "Oh, a few minutes every week." By the time you have taken your car and driven to the supermarket, taken your foraging-trolley and collected your wild greens, and driven back home again, you've spent a good hour or two — plus you've spent a lot of money.

LONDON: Even though permaculture is based on scientific principles, it seems to have a very strong philosophical or ethical dimension.

MOLLISON: There is an ethical dimension because I think science without ethics is sociopathology. To say, "I'll apply what I know regardless of the outcome" is to

take absolutely no responsibility for your actions. I don't want to be associated with that sort of science.

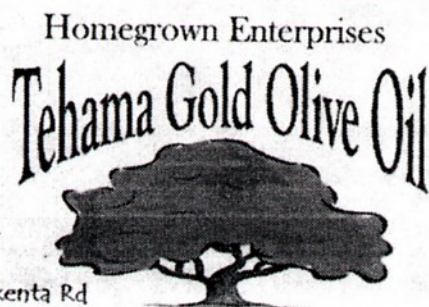
LONDON: What do you think you've started?

MOLLISON: Well, it's a revolution. But it's the sort of revolution that no one will notice. It might get a little shadier. Buildings might function better. You might have less money to earn because your food is all around you and you don't have any energy costs. Giant amounts of money might be freed up in society so that we can provide for ourselves better.

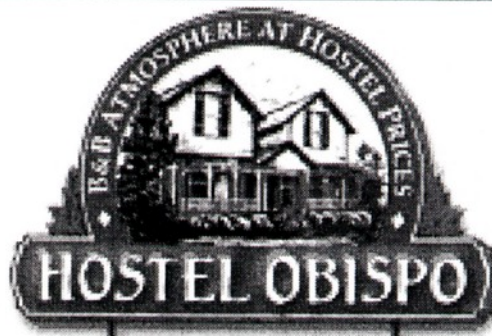
So it's a revolution. But permaculture is anti-political. There is no room for politicians or administrators or priests. And there are no laws either. The only ethics we obey are: care of the earth, care of people, and reinvestment in those ends. ○

Scott London is a writer and radio producer based in Santa Barbara. This interview was adapted from his radio series "Insight & Outlook." For more information, visit his web site at: www.scottlondon.com.

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Permaculture Teachers Speak about Permaculture

by Marcia Boruta

When Wes Roe asked me to help edit this special issue, I jumped at the chance. My assignment was to summarize responses from 13 permaculture teachers to an email questionnaire developed by Bob Banner, Wes Roe, Margie Bushman and myself.

As a newcomer to Permaculture (I first heard the term in 1999), I was curious to read what seasoned practitioners had to say. I mulled over the 10,000 thoughtful words we received and faced the challenge of choosing only 2,000 for this article. Here's what permaculture teachers say about permaculture — what it is, why they do it, and what the future holds.

DEFINING PERMACULTURE

We asked respondents, *"Please define permaculture in your own words."* Anyone who's struggled to answer this will be reassured by Dan Hemenway's response: "It cannot be defined, which means, literally, to put boundaries on it. It is like defining poetry, only more so."

Despite this constraint, respondents provided a rich collection of ways to define the undefinable (see box on pps. 14-15).

FINDING INSPIRATION

To find out why permaculture teachers are doing what they're doing, we asked two questions: *"What brought you to permaculture?"* and *"What has inspired you the most about permaculture?"*

Some of the early adopters came to permaculture through farming and organic gardening:

Robyn Francis: "A natural progression. Early '70s I was organic gardening and observing traditional (non-chemical) farming systems in my travels around the world and dreamed of buying land to develop as a botanic garden of useful plants arranged like natural ecosystems. Got back to Australia in 1977 and a

dude by the name of Bill Mollison was talking the same thing but a quantum leap further down the track. So, Permaculture was a natural next step."

Over the years, the search for sustainable living strategies has brought others:

Joanne Tippet: "What brought me to permaculture was a passionate belief in the need to change how we live and a hope for a more fulfilling way to do so."

Scott Pittman: "Permaculture was the perfect discipline for me, it combines my deep commitment to environmental health of the planet with practical solutions that have worked over the ages."

Penny Livingston: "I wanted to create a livelihood that resonated with my values."

What inspires people about permaculture can be summed up in two words — "positive" and "practical": **Sindhu Lawton:** "Permaculture will enhance life in general for all the people of the world and with beneficial effects to the planet."

Michael Kramer: "Its positive stance in the face of cynicism, and the ways in which its tenets can be applied to all human systems rather than just land-based systems."

Dan Hemenway: "It works. I was making some of it work before the term was coined, but I didn't have a name for it. It is an approach to designing our lives, lifestyles, and immediate environments that has a chance of pulling the fat out of the fire, of maybe saving our species, and millions of others, from extinction. I have children and now grandchildren. The future is important to me."

FAILURE & SUCCESS

We asked two routine interview questions: *"What failures have you witnessed and what was the result of the failures?"* and *"What has been the most successful permaculture design/method/*

experiment that you personally participated in?" A number of teachers reminded us of basic permaculture lessons:

Larry Santoyo: "This is an easy answer because in Permaculture Design we really don't describe things as failures. Failure connotes that a project has ended. But like nature, Permaculture Design doesn't end. We evaluate and adjust for productivity. The only failures would be 'failure to adjust'."

Sindhu Lawton: "I believe that soil building has to be our number-one goal and, with good mulching practices, including 'chop and drop' and living mulches, we can have no failures as such. ... The only failure comes in bad design which causes erosion and soil loss. All other mistakes are only temporary and should be turned into lessons, and the knowledge shared."

The most common "failure" noted by respondents was misinformation: **Michael Kramer:** "People sometimes think permaculture is the child of biodynamics or that it is the sum of certain techniques rather than seeing the design process as the cornerstone of the approach. This has resulted in a narrow national understanding of Permaculture and its potential applications. It is largely because of this that Permaculture has yet to take hold in America, which I consider a failure to date."

Larry Santoyo: "Sometimes I hear people say that Permaculture is about gardening or about building with straw or some other technique they learned or heard about. I think that some students and many teachers have failed to 'get' that the hands-on techniques that we teach in Permaculture Design are to reinforce the theory. The theoretical base of Permaculture is the most important thing we have to teach. It's what sets us apart from other design disciplines. You can learn how to do a technique from many places, but the most important thing about

Permaculture is learning *why* and *when* it is most appropriate to use a technology."

Robyn Francis: "Most failures I have seen with people attempting Permaculture have been due to inappropriate applications of specific techniques and not understanding the principles behind them. ... Beware of permadogma — doing things from the book, by the book without looking at the individual situation and applying the principles to find the most appropriate solution."

Respondents cited success stories:

Christopher Peck: "My own business, Holistic Solutions, ... is a financial planning and socially responsible investment advisory firm based on Permaculture principles. We are growing and thriving!"

Rick Valley: "Lost Valley Educational Center and Linnea Farm may not appear that spectacular but they are both proceeding at a sustainable rate and aren't dependent on one individual or source of funds. Also, both are teaching a great many people."

Sindhu Lawton: "I have been involved in many success stories, but the one I have been most involved in outside of Australia is our Jordan project. We

have been working on a 10-acre project there in conjunction with local and Japanese aid."

Mike Collins: "So far the most successful Perm experiment I have been involved in is at Davis Bynum winery, an organic winery with a yen for experimentation in Permaculture."

Robyn Francis: "The past eight years of creating my Permaculture cornucopia here at Djanbung Gardens is definitely the most successful design and experiment I've personally participated in."

Michael Kramer: "A *Permaculture Curriculum* by Christopher Peck and myself, which hasn't yet been published, is really the best how-to-teach Permaculture guide I've seen. Also, I've designed and facilitated workshops for schoolteachers on how to integrate Permaculture into academic programs."

Scott Pittman: "Madre de Selva in Ecuador is the most successful project I've participated in. This is a food plant nursery with over 300 varieties of tropical fruit species, which provides seeds and seedlings to regional farmers and homesteaders."

Holger Hieronimi: "There have been several successes: Granja TAMU in Michoacán/ Mexico — transformation

of one hectare of sterile alkaline land into a multi-productive forest-garden; Escuela "Ollini" in Tepoztlán, Morelos — a small school garden where the kids grew vegetables in bio-intensive gardens; Proyecto Granja Huehue in Huehucoyotl ecovillage in Tepoztlán, Morelos — community garden and several family gardens as well as general ecovillage designs (rainwater catchment; gray/blackwater treatment/recycling; eco-construction) for an intentional community and ecovillage of around 25 residents."

Penny Livingston: "Our PINC [Permaculture Institute of Northern California] garden has been more successful than I ever dreamed. People come from all over and often have an emotional response to the feeling of connection and the possibility of healing our relationship with our environment."

Larry Santoyo: "My favorite designs don't include plants (directly). I helped open a restaurant with some friends a few years back, and because Permaculture is really a 'connecting' system, this restaurant best illustrates the Permaculture principle of 'stacking functions' and 'harmonics.' It served not only as an outlet for local organic food and a very cool place to 'see and

WHAT IS PERMACULTURE? IN THEIR OWN WORDS...

"Whole-systems design for sustainable living with an emphasis on the human ecology." — Mike Collins (California & Baja Mexico) <sonoperm@monitor.net>

"In a nutshell, Permaculture is both a philosophy and an interdisciplinary design system to create sustainable ecosystems which support human needs in a way that treads lightly on the earth and which respects, conserves and regenerates natural ecosystems. The principles of Permaculture are based on ecology and can be applied to all climates and

environments from the city to the wilderness, from the backyard to the bioregion. Permaculture is dancing with nature where nature leads the dance." — Robyn Francis (Australia) <permed@nor.com.au> www.earthwise.org.au

"Permaculture is a wholistic design philosophy with an ethical foundation and a penchant for practicality." — Dan Hemenway (Florida) <http://barkingfrogspc.tripod.com/frames.html>

"Permanent Agriculture = Permanent Culture. No society, no culture is sustainable without sustainable agricultural practices. Permaculture is a holistic design philosophy to develop productive agro-eco-systems, which satisfy human needs without destroying the natural environment. Permaculture is a whole range of sustainable, ecological and energy-saving techniques and lifestyles." — Holger Hieronimi (México) <tierramor@laneta.apc.org>

"Permaculture is a design science for living and non-living systems that provide for human needs in a way that enhances the environment." — Sindhu Lawton (Australia) <pri@permaculture.org.au> www.permaculture.org.au

be seen,' but also as an art gallery, a music venue, a gift shop, an office and meeting room. All of those ventures were tried before, as separate businesses, but were never productive until, as in nature, they were all linked together! It has continued to evolve since then and is still in business today."

We also asked the teachers about the permaculture curriculum: "The 72-hour *Permaculture Design Course* is a teaching tool for introducing people to the *Principles of Permaculture Design*, the ethics, and their application to living systems. What are your thoughts on the *Permaculture Design Course* as a teaching tool?" This question generated the most response, but for this article, suffice it to say,

there was general praise for the curriculum and many suggestions for adjustments to make it more productive.

Permaculture ethics/design/methodology/ systems to become more potent and influential within the mainstream?"

Christopher Peck: "Everyone should

read Holmgren's article about the future of Permaculture from several years ago. It strongly influenced my current course. He makes the point that we don't need 'Permaculture designers' or 'Permaculturists.' He suggests that what we need are people of all professions — landscape architects, builders, bankers, bakers, etc., — to take on the ethics and principles of Permaculture and apply them from within their professions to slowly transform them into what we want. The mainstream is not

walking around thinking, 'I need Permaculture,' or 'I need a comprehensive design methodology that can help me model all human systems on nature's principles.' They are walking

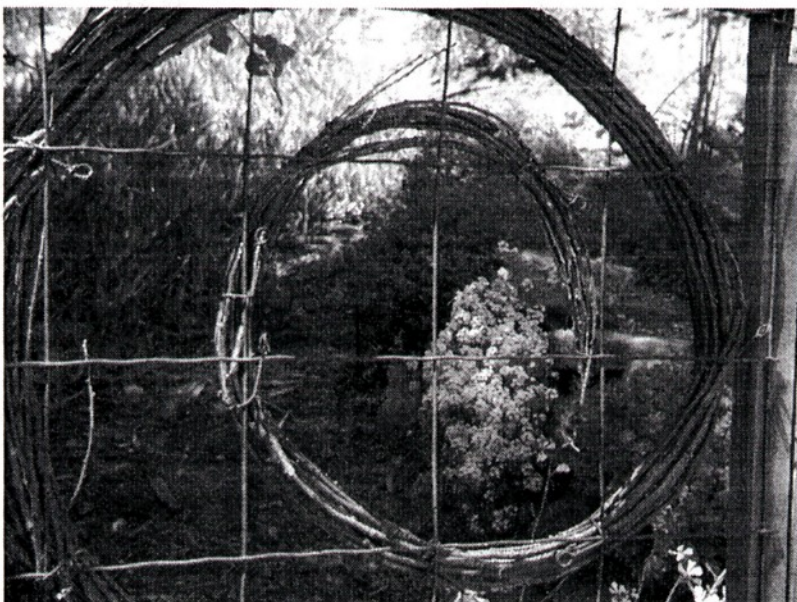


Photo by Terri Dunivant. Temenos Teaching Gardens

THE FUTURE

Finally, we asked the teachers: "What needs to be done in order to get

"Permaculture is a design science, based on observation, that integrates all human activities into a whole system based on natural patterning and ecology. In a word, Permaculture = Relationship." — Penny Livingston (California) <pinc@svn.net / www.permacultureinstitute.com>

"I always quote Bill, who said it best: 'Permaculture seeks the garden of Eden, and why not?'" — Christopher Peck (California) <www.Holistic-Solutions.net>

"Permaculture is a design system based on ecological processes. Those natural processes, which have proven sustainable over thousands of years, are then applied to the human-created environment with the intention of living sustainably." —

Scott Pittman (New Mexico)
<pci@permaculture-inst.org>

"Permaculture is a strategy for land-use planning and design that uses indicators of sustainability found in all natural ecosystems. Permaculture Design is best suited for designing economic development programs and community social services. Permaculture Design provides the practical aspects of the philosophy of 'all things being connected.' Permaculture is a noun, but it is not a place that you can visit. It is almost more of a verb. You use Permaculture Principles to *design* a place that you can visit. Permaculture is the process, not the place!" — Larry Santoyo (California)
<santoyo@earthflow.com>
www.earthflow.com

"Ecological systems design that works with ecological principles to increase productivity, enhance the local environment and biodiversity, work with the character of the landscape and increase the possibilities for a vibrant local economy." — Joanne Tippet (California & England) <jo@holocene.net>
www.holocene.net

"I like Lea Harrison's 'design of sustainable human habitats.' I've never tried to define it." — Rick Valley (Oregon)
<www.teleport.com/~dbrooks/bamboo.html>

around with needs and dreams that Permaculture is uniquely well-suited to satisfy. My strategy is that we build businesses that satisfy people's needs, while simultaneously regenerating the natural world and human communities."

Joanne Tippet: "To bring Permaculture into the mainstream, we need a wide range of classes and courses that introduce people to the concepts through practical work in projects of local interest, projects that add to the local environment, and through which people learn skills and gain a greater awareness of the environment."

Holger Hieronimi: "Sometimes it seems that the mainstream has to get a bit more sensitive to holistic design. Permaculture has always had difficulties getting into the universities, because all those specialists cannot tolerate the design philosophy that integrates forestry, agriculture, horticulture, silviculture, architecture, geography, biology, chemistry, anthropology, etc. Permaculture probably shouldn't be promoted so much as 'a package.' ... Working in Latin America I found it more successful to

just promote some of the 'best practices,' just starting here and now with what they have available."

Dan Hemenway: "We need to walk our talk and be ready to help those who ask for it. ... Our emphasis needs to be on education, initially, and incorporating Permaculture into our cultures. ... And, Bill's maxim comes to mind: We have to stop being impressed by people who have money."

Penny Livingston: "We need to cultivate more teachers and practitioners who are not making other people and mainstream culture 'wrong.' This does more to alienate people than anything else I know."

Michael Kramer: "There should be Permaculture degree programs in major universities or community colleges, and more on-the-ground demonstration sites on single-family suburban lots."

Michael Lockman: "We need more books like Toby Hemenway's [*Gaia's Garden: A Guide to Home-Scale Permaculture*]! Translate the jargon into words that anyone can understand."

Larry Santoyo: "I think Permaculture is potent and I think it has become influential. When I first started

teaching Permaculture, almost 15 years ago, very few people had even heard of it; today there are literally thousands of projects, courses, and design trainees all over the world. But it is not the term we want to have power, it is the ethics. It doesn't matter if we call it Permaculture. We want people to rethink how they participate in the landscape; to 'care for the earth and care for people,' not know what Permaculture is. This goes back to the ecological principle of natural succession and evolution. We simply need more and more of the same: Permaculture lectures, workshops, design courses, and articles, wherever we can get it. ... Permaculture has come a long way; it has gotten this far, first of all, because it's a good idea, secondly, because our educational outreach hasn't stopped. It's on a roll, with a life of its own!" ○

Marcia Boruta is Director of the San Diego Permaculture Center. If you are interested in seeing the entire collection of answers, contact HopeDance editor Bob Banner at (805) 544-9663 or email him at editor@hopedance.org

HopeDance Films at The Palm Theatre



TERRORISM: THEIRS AND OURS

Three films about terrorism will be shown on Tuesday, **November 13** at the Palm Theatre in San Luis Obispo from 7 to 9pm.

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- To conclude the evening, we will show a short film called **SATYA, A PRAYER FOR THE ENEMY**. The film reveals how

Tibetan Buddhist nuns have turned to non-violent actions in their struggle against oppressive Chinese policies.

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For more information, contact HopeDance at 544-9663.

\$10 for general admission; \$5 for students, seniors and children under 12. No reservations necessary. Please come early. A dinner at Big Sky (at 5pm) prefaces the evenings. Monies benefit HopeDance magazine.



The next step: Transforming the building industry to model nature

by Ben Haggard

The idea was simple enough: gather an experienced bunch of permaculturalists, add corporate consultants who base their work on living systems models, blend at high speed and see what happens. Nearly five years later, the experiment is beginning to show results — not that it's gotten any easier living in a high speed blender — and Regenesys, Inc. is slowly establishing itself as a leading innovator in the field of green development. Regenesys was born out of a series of two-day meetings held in Santa Fe, NM, in the winter of 1997. About a dozen people with ties to permaculture wrestled with questions about how to increase the effectiveness of the permaculture model to

shift what was going on in the world, and how to use business as a way to bring permaculture into the mainstream. We focused on the field of development, which includes builders, architects, planners, engineers, etc. Our strategy was to evolve the industry itself by working as consultants with these professionals, helping them to be more effective at making their world a better and more sustainable place. After all, making the world a better place is what

draws many people into these professions in the first place. But development requires them to evolve their understanding of the living systems they are working in, and consequently to evolve their goals and their methods. As a result of this focus, we have formulated a number of innovative approaches and ways of thinking about development that have, we hope, the potential to set an entirely new standard for how it occurs in this

If we think of places as alive and dynamic, then we want to understand the inherent potential in them, and to enable them to evolve more and more toward realization of that potential. It's not so different from the way we might want to treat our children, seeing their unique potential and then doing whatever we can to help them bring that potential into flower.

To be more specific, let's think about site assessment, a commonly discussed process within the permaculture community. Site assessments often end up yielding a laundry list of characteristics we learn about the effects of wind, water and other energies on a site. We study soils and underlying geological structures, we classify plant and animal communities and attempt to describe their relative health. But this is like

trying to understand a person by describing the color of eyes or hair, or the way they walk. When it comes to living systems, the whole is far more than the sum of the parts. If we actually want to know someone, and if we want to know a place, we must penetrate beneath the surface characteristics to discover the organizing core that generates those characteristics. Like people, places have soul.



Photo by Terri Dunivant. Temenos Teaching Gardens.

country. We call this approach Regenerative Development.

An important premise that lies behind the thinking at Regenesys is that human beings have a potentially beneficial and even evolutionary role to play in natural systems and that development can be a powerful tool either for destruction or for good. But in order to play that role, humans must come to understand, and then align themselves with, the essence of a place.

The soul of a place is unique, distinctive. It engages in its own processes for organizing life, and it has its own evolutionary tendencies based on its own inherent potential. If we want to create projects that are truly regenerative, then we must discern this underlying evolutionary tendency and shape our actions to support and nourish it. We need to see the will (or essence) of the living system so that we can align with it.

One of the problems with many green developments (including many permaculture projects) is that we design

them beautifully with regard to their parts. But then we forget that those parts need to come together into a meaningful whole, one that is in appropriate relationship to the larger community and natural systems it's nested in. Part of what makes a relationship appropriate is when our project contributes back to the health of its environment, enabling it to be more itself rather than diminishing it.

At Campo Verde, a small subdivision of five homes in northern New Mexico, Regenesis described the core process of the place as one of concentrations and then slow dissemination of resources.

Located in a fertile river valley, the site had a long history of traditional agriculture. Every aspect of the site design attempted to

regenerate the site's agricultural potential, even as it was being converted to residential use. Acequias, the traditional irrigation systems of New Mexico, became the organizing core of the project, just as they had organized the village design and lifeways that dominated this site in the past. Designing Campo Verde to be an "acequia neighborhood," Regenesis used

the irrigation network to link this new community to all the other neighborhoods up and downstream, to link it to the unique history of this place, and to link it to its future as a perennial agricultural forest.

Over time, it has become clear that our work needs to focus on helping our clients and their professional consultants to think more systemically to be able to understand the impacts of their designs on the health and evolutionary potential of the land and the communities they are working in. Inviting and assisting people to think outside of the paradigms they are accustomed to can be challenging, but it is also rewarding. The sense of inspiration and excitement that enters a project when it is clearly aligned with the spirit of a place is palpable. Neighbors who have typically opposed development find themselves supporting projects that they can clearly see enhance the well-being of the communities and landscapes they care about. These projects bring a new spirit into communities, since they point the way to a possible future of harmony between people and nature.

Currently, Regenesis is working on projects throughout the United States. We describe ourselves as eco-logical resources to design and development professionals. The scale of projects we work on ranges from individual homes and farms to entire new towns. We work with city planning departments and community organizations, as well as with developers and architects. In every case, our objective is to create a deeper and more enduring relationship between people and place. ○

Ben Haggard is an author, educator, and design consultant. He authored *Living Community, A Permaculture Case Study at Sol y Sombra*. He spent many years working in the permaculture field and was a founder of Permaculture Drylands Institute. He is a principal and founding member of Regenesis, Inc. and lives in Santa Fe, NM. For more information about Regenesis, please visit www.regenesisgroup.com.

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Working on Oneself as a way to Sustain a Revolutionary Community

by Toby Hemenway

"This makes me so mad!" I growl, throwing the newspaper onto the kitchen table. Another example of corporate greed, another despoliation, another "if it bleeds, it leads" news story. My wife turns her eyes from the busy hummingbird feeder outside the window and asks, "If it makes you this unhappy, why do you read it?"

A good question. I had turned to permaculture because it offered positive solutions. The constant fire-fighting of environmental activism wasn't for me, though at first it seemed the only way to offer aid to a suffering planet. But the fragile victories seemed so fleeting and ineffectual in the face of such wholesale rapine. The constant reacting to new abominations forcing a constant catch-up game, and the daily misery of watching another forest fall are too disheartening. Permaculture's constructive approach suited my constitution, my hopes, and my desire to avoid a retreat into a Prozac- and Xanax-induced Lotus-land.

Yet those lists of genetically modified foods, the lobbyist-bought Senate riders, the battering at the Endangered Species Act still grab my heart and set my bile ducts squirting. What good is that anger? Plenty, I imagine Bill Mollison would tell me. Bill has readily declared that it is anger that motivates him to do his award-winning and vital work. Anger is a powerful force. When Bill regales a group of students with a tale of a once-healthy Mexican fishing town reduced to starvation after a pet-food cannery moved in, and he finishes: "So instead of buying pet food, you

should just murder a Mexican child and feed him to Fido, because that's basically what you're doing." Everyone is outraged, feels a little guilty, and is ready to change the world.

Permaculture, like many revolutionary fields, has its share of angry, cantankerous men (and generally they are men). We all know a few of these crucial agents of change. Their ranks are legion in new endeavors, whether it's

John L. Lewis raging at the miserable conditions of coal miners, Martin Luther spiking his 95 theses to the Wittenburg church door, or T. H. Huxley — Darwin's bulldog — eloquently

reducing the opponents of natural selection to impotent sputters. These giants inspire, motivate, and create. But their anger also leaves wreckage in its wake. Trailing many of these charismatic people, along with their superb works, are fractured communities, confused and bitter followers, broken marriages, and often, an opposition just as motivated to thwart them. When anger is the propellant, the line between inspiring and antagonizing is easily breached.

Raging Bulls and Charismatic Curmudgeons

Angry people seem essential for revolutions. But as permaculture matures and its boundaries grow more defined, I'd argue that there is less need for raging bulls and curmudgeons. I respect and cherish the work and, yes, the personalities, of those angry men. We wouldn't be here



Photo by Terri Dunivant, Temenos Teaching Gardens.

without them, and their place at the head of the table is always open. But sustaining revolutions calls for different methods than does creating them, which is a process of crashing down the door and raising the alarm. Sustaining them requires knitting a community and welcoming the converted, the hesitant, and the opposed. Someone seething with rage, or with any other unresolved manifestation of what Jung would call "the shadow," will continually boil

over, spraying friend and foe alike with venom and poisoning a healthy network.

I don't mean to single out angry men. We each have our challenges, our sharp edges that can wound those whom we care about and work with. Many communities and movements, though united by a common vision, stumble when personality — our fears, anger, insecurities, or ego — rears its head. Recently, yet another set of my friends left an intentional community. "We spent all our time in meetings," they lamented. "Just deciding to fix the washing machine took six hours of consensus-building. Nothing ever got done. I couldn't take it."

Successful communities possess, or are forced to develop, more than just a common vision. Their members also devise techniques for working with each other. Often this means calling in a counselor or other specialist to give them tools to identify the personal conflicts and motivations that underlie their community's dynamics, and to separate personal issues from community needs. Only then can they make progress — usually independently — on either the interpersonal or communal front. Those six-hour washing-machine meetings are often group-therapy sessions in disguise, a cacophonous roomful of inner children, shadow selves, and unconscious coping-mechanisms wrangling over deep, unspoken issues. No wonder nothing ever gets done. If I think I'm discussing washer repair when I'm actually battling the ghosts of a neglectful father and mercurial mother, we'll be in meetings until I've had a psychological breakthrough. Fat chance, under those circumstances.

The Enlightened Permaculturist

With this in mind, I make a plea for

more personal work, for more conscious and mindful action in permaculture: Enlightened permaculturists, if you will. A trend toward this is already underway, seen, for example in the evolution of permaculture teaching. Initially the design course was a lecture series — often taught by one or another charismatic curmudgeon — and although the material was far more holistic and vital than most college curricula, the format was straight from an airless classroom. Early permaculture students recognized that the community-building aspect of the design course was as powerful and motivating as the content.

When these students emerged as a second generation of teachers, they doled out some of the curriculum in an experiential and team-building format, adapted to diverse learning styles. Some of these new teachers went to non-traditional schools themselves, and many have pursued spiritual paths or deep personal work. They have brought a different consciousness to the design course.

A second example of permaculture's evolution is in the growth of the concept of Zone Zero. Originally defined in the zones-and-sectors-design-scheme as the house itself, Zone Zero rapidly enlarged to include the home's occupants. More recently, the definition has shifted in some circles to mean the mental and emotional state of the residents, the designer, and of permaculturists in general. "Working on Zone Zero" means getting your act together. It's an eminently useful concept that can serve as a call to more conscious design and living.

Last summer's "Build Here Now" convergence among permaculture, natural building, and spirituality at Taos-based Lama Foundation highlights the trend. Lama's small spiritual community was nearly overrun with a hundred mud-daubed

builders and pontificating permies. But Lama's constant reminders of life's higher purposes — fluttering prayer flags, the wail of early morning devotional song — and the nurturing, enfolding atmosphere created by the community fostered a level of meaning and connection I've never experienced at conferences, even in permaculture. I had a glimpse of a world in which our inner selves, spiritual hearts, and activist hands were united.

Evangelists or Listeners?

Permaculture has always argued that acknowledging the cultural milieu of the design client is critical for success. I'd apply this principle to our field in general: Unless permaculturists explore the matrix of psychological forces that unconsciously motivate and rule us, and we resolve the hidden sources of our anger, need for recognition, or other manifestations of inner conflict, we'll continue to sow the seeds of our movement's destruction and be ignored or disdained by the mainstream world. To create sustainable communities requires the highest form of self-reliance: emotionally healthy people.

What would the "enlightened permaculturist" look like? Perhaps this: Say a large corporation wants your help in designing a new office site. If you go to them, fired up with the dogma of sustainability, and say, "You guys are doing everything wrong, and I'm going to tell you how to do it right," they'll dismiss you out of hand. Many of us regard the mainstream with just this contempt. However, if you begin by listening to them, asking them, "What are your goals?" you'll find that their aims aren't "to destroy ecosystems and enslave the world," but more likely, "to have more productive employees and avoid waste."

Let's think about the phrase "more productive employees" and see how helping a company achieve that

goal can serve a larger purpose. Back in the days of manufacturing-based business, higher productivity simply meant giving a worker a better machine and ordering her to make more widgets per day. But many businesses now run on ideas. Managers can't say, "I need 20% more creativity from you next year." They must foster an atmosphere that nurtures creativity. This is where you, the designer, come in. Your marvelous office design includes more windows, less fluorescent light, a cafeteria that serves organic food grown in the once turf-bound lot surrounding the building, and 50 other elements that enlarge the lives of those who work there.

Now those employees are not just working in a healthy climate that inspires creativity, they're entwined by an ecological, holistic way of living. They begin to see the possibilities for their own lives. Who

knows, maybe some of them will be inspired to chuck the corporate rat race and live a meaningful life. All this simply because you helped a corporation achieve its goals, gently implanting a larger agenda as you did so. Turning our backs or shouting in rage won't do this.

Permaculturists are bursting with a new message. We want to tell the world. But nobody likes being told they're wrong; proselytizers are notoriously unpopular. The hallmark of much of what I'm describing here — teaching permaculture differently, helping communities survive, working with the mainstream — requires that, though we're bursting to talk, we get quiet and listen. This theme echoes throughout this magazine: listenening to our archetypes, returning to our earliest desires yields good design, describing circles in which we hear the concerns of

others, and learning to work together deeply.

Permaculture is based on observation. I ask that we observe ourselves — our hidden, internal ecosystem — more carefully, so that our actions with one another may be more conscious and less the product of old habits. By the simple act of careful, mindful listening to what speaks within us, listening to what others need to have us hear, we can dispel anger, open doorways, and forge lasting alliances. ○

Toby Hemenway is the author of Gaia's Garden: A Guide to Home-Scale Permaculture, associate editor of The Permaculture Activist. This article originally appeared in Permaculture Activist #42. Subscriptions to The Permaculture Activist are \$19 (3 issues plus newsletters) from P.O. Box 1209, Black Mountain, NC, 28711.

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The Dynamics of Culture & its Relevance to Permaculture

by Robyn Francis

Some thoughts on the issues of teaching in other cultures

Cultures are dynamic and human memory short - I have been alarmed at the rapidity of change, at the loss and erosion of sustainable traditional practices as 'Green Revolution' techniques and concepts introduced only a few decades ago have been accepted and applied unquestioningly in the 'developing' world. This has been compounded with the introduction of centralised education and schooling which gives the young little opportunity to learn traditional skills in the traditional way together with the infiltration of the cash economy and the general devaluation of farming as a profession.

This in turn is largely a result of the shift from subsistence farming to commercial agriculture which in turn is exacerbated by the corruption of local wealthy families, their exploitation of the poor, and the control of international markets which keep prices artificially low - especially at the producer end - in the name of the 'free economy' and globalisation. The end scenario is that the rural poor are poorer than ever before, the young are increasingly alienated from their culture and see little or no future in farming or village life.

In Bali one rarely sees a young person working in the fields or rice paddies - it's the old folk out there and one wonders what will happen when they are simply too old to continue such hard physical labor. I'm informed that it's not only in the relative affluence of Bali that this is happening, it's a phenomena occurring in all too many places, countries and cultures.

I was invited to teach a PDC [Permaculture Design Course] in Indonesia in March 1999. Thirty-five participants from all over Indonesia, from very different cultures and climates from Sumatra to

Kalimantan to West Timor, converged in Bali for the course. There was concern amongst some participants and organisers as to whether the course would be truly appropriate or whether it was just another kind of colonialism - an Australian concept taught by an Australian teacher. This is a trap and a risk that I am acutely aware of and careful to avoid. In many respects it depends upon how the teacher sees permaculture as well as the way it is taught.

The risk is greatest when the teacher sees permaculture as a kind of formula and teaches sheet-mulching, banana circles, mandala gardens and Zones 1 to 5 - there are a lot of things, ideas and design strategies in permaculture that people can readily turn into perma-dogmas. When this happens then - yes - it's a new perma-colonialism. You don't need to do a PDC to make a herb spiral, chook-tractor or create a food forest - these things can be easily done from the plan, from the books.

What I see as being the most valuable thing about permaculture, and the greatest challenge for a permaculture teacher to teach, is the process of lateral thinking and questioning, of developing the art of analytical observation - not just of things but more importantly of the processes at play, of seeking and interpreting information and applying it appropriately to the situation at hand. The greatest challenge is that these 'process' skills cannot be simply taught - like one can simply teach how to make a tyre pond - the best one can do as a teacher is to try and facilitate the student's own learning of these process skills through example and by providing opportunities for the students to practice, explore and interact.

At the end of the Bali course the most rewarding feedback from students was "Thank you for teaching me how to

think" along with "Thank you for helping me see my culture in a new way and the importance of our sustainable traditions that are being lost."

As westerners we take so much for granted, especially our 'freedom' of thought. It was a cultural shock for me to fully appreciate how repressed human thinking and creativity can be. My Indonesian course participants explained how their education is all rote learning with no room (and severe penalties) for original thinking, questioning or creativity, how this is reinforced by the day to day reality of living in a controlled and corrupt socio-political environment.

Living in some traditional cultures can also be ruthlessly thought-repressive, the young (including young adults) have no say, do as they're told, and 'you do it this way because this is the way it's done and because it's what you've been told to do'. There are no other reasons why and to question is to defy authority. The opportunity for innovation is severely limited.

This lack of analytical questioning and creative thinking leaves a culture exceptionally vulnerable, especially when an expert, respected as a figure of higher authority, comes along and says 'don't do it that way-do it this way'. Change can be, and frequently is, accepted without question or thought. People may feel intuitively uncomfortable with some of the changes and concerned about the results as they manifest over time, but lack the knowledge to understand why it's not working and lack access to information to look at alternatives.

Permaculture as a process of analytical observation, lateral thinking and creative problem solving together with a basic understanding of ecology and natural process certainly draws upon examples of sustainable traditional systems from around the world. Yet it pays to remember that most of

these systems evolved countless generations ago as a result of trial and error without necessarily understanding the why's, or if the why's were initially understood that information has not always been passed on. (Beware of the 'noble-savage' syndrome).

I have found when teaching permaculture in developing countries and with indigenous peoples that my students are exhilarated with their awakening awareness of process and creative thinking, and of having a framework of principles of sustainability by which to look afresh at their culture and measure the relative sustainability of remaining traditions, introduced practices and a fresh enthusiasm to rediscover (recover) the traditional practices, knowledge and wisdom that is rapidly being lost.

Culture is dynamic, just like an ecosystem is a dynamic system, continuously evolving and adapting to new influences and changing factors around and within itself. The risk in human culture is that the good practices that have sustained in the past can be so easily lost and replaced with new techniques and values that erode human security, well-being and the environment and resource base it depends on.

In the same way Permaculture also needs to be seen and taught as a dynamic system of thinking, planning and design which is adapted and reinvented in each new culture and context into which it is introduced. Permaculture needs to constantly adjust and adapt to the changing needs, perceptions and demands of a changing

world. Indeed, this is the only sustainable future for permaculture as a concept and as a movement or it risks stagnation and becoming frozen in the dogmas created by its perpetrators. ○

Robyn Francis is well known as a designer and teacher of permaculture since 1985 and was founding director of Permaculture International. She continues to pioneer new frontiers in her work and share this accumulated experience through her courses. Robyn established and manages Djanbung Gardens Permaculture Education Centre and the ERDA Institute Trust at Nimbin in Northern NSW. This article was published in Permaculture International Journal in 2000. Check out Robyn Francis' website at <http://www.earthwise.org.au>

PERMACULTURE IN LESOTHO

by Chief Maama Masopha

*Working with nature is my hobby,
Working with nature is part of my life.
Permaculture, where were you
When we lost the vegetation we had?
Permaculture where have you been?
Now that we are starving,
Why did you delay to be known,
While we have many specialists?
My country is now bare.
Who can we blame?*

*Herbs are diminishing,
Drought has taken advantage.
Where shall we get the herbs?
What will the herbalists do?
Importation is becoming our motto.
Our soils are very poor,
Their good structures are gone,
Their textures are destroyed,
Yet you are present and silent.*

*Why did you hesitate so long to be
applied in Lesotho,
Yet you are known by the world?
Chemicals have spoiled our soils,
The ecosystem is disconnected,
People and animals are suffocated,
Chemicals are very expensive,*

*Farmers cannot afford.
Permaculture, do you know where you
originate?*

*You are a citizen of Australia,
Your fathers gave you a good name.
We highly appreciate their thoughts,
Because you involve everything.
Living things are in need of you,
Besides you, there is no living.
New Zealand visited your home,
They saw your preciousness,
They wanted to elope with you.
This, your fathers appreciated,
Because you are a child of nations.
Your wonders reached Nepal and
Zimbabwe.*

*The idea was put into practice, you
proved to be creative.
Botswana did not hesitate,
Possibly Kalahari Desert will improve.
U.S. accepted your challenge,
They made trials on small scales,
Less expenses with high yields,
With natural resources surrounding you.
England became aware of your tricks,
They allowed you to rule their hearts.
Thailand heard of this new technique,
They wanted a positive change
And you did not betray them.*

*Permaculture, become our living,
Your ideas are perfect,
Your principles are marvelous.
Your fruits are known by the world.
Your absence caused migration,
Ignorance of you caused erosion.
Look at the mountains in Lesotho;
Big dongas are countless,
One district is almost a desert,
Maize does not reach the height of a
man.
Who to care about this situation?
Our top soils are enriching another
country,
Tonnes of soil are deposited every year,
As if not enough,
Our water is irrigating another country.
Permaculture, we are in need of you.
Unity is our motto and our song.
Are we doing it practically?*

*Berea, Maseru, Quithing Agriculture
Groups, what are your views?
How many schools are members? If they
are few, why?
How can we solve this problem?
For how long do we ask for funds
From countries which have the same
problems?
Why can't we change?
Not only the attitudes of people,
But do.*

Short Personal Stories...

Farming for the Future

Field Notes from an Indian Detention Center

by Ed Mendoza

I swelter in the sun of southern Arizona summers, and I bask in the brisk winters to farm, by and large, all year round. As I work with youth in the rows of vegetables and other crops, I often think about what these kids' future will be. They know little about nature and the essence and satisfaction of hard work, the rhythm of the body and mind in sync, focus and purpose. Here at the O'odham Oidak Farm, or "the people's field" in the Pima language, we grow primarily the traditional, native,

effort.

I am consumed with working the field and rehabilitating soil, to be in a position to grow food that is good for the soul and the body. While working the Farm (Gila River Indian Community Juvenile Detention and Rehabilitation Center, O'odham Oidak Farm) the process, of course, is to rehabilitate juveniles; up to 80 females and males at any given time are in the detention center. Though working with youth is challenging, it certainly can be rewarding. I believe our modest program can make a huge difference in these young people's lives.

Here we are on 20 acres of land which, for over last half-century, had been abused, then left neglected. To bring productivity to this land again we

have had to invest in some inputs. We initially had the fields leveled and we put in a cement ditch to make better use of the water. While doing this, we designed an aquaculture pond at the top of the fields that would allow us to run fresh water to the ponds and, then, as the ponds got full, they would overflow to the ditch and to the fields with nutrient rich water.

The pond became more than just a place to grow fish and

fertilizer. We started to see other life come around: bugs above and in the water, frogs and toads, some water fowl, and much more. As a part of this design, we also have fresh-water prawns that eat the leftovers from the fish, and of course everything is eating algae, bugs, and other life. Economically, the prawns (or shrimp, as they are often called) provide the marketing tool, or the niche, that any farmer could adopt to diversify the family's income and

make the small farm a more viable operation.

Although ours is certainly not the ultimate system, it is a model by which southern farmers could work with, with the given that each farmer has specific and locally-based circumstances to deal with. While we have produced over 1,000 pounds of fish and perhaps 200 pounds of prawns (tomorrow is prawn harvest day), we are continually working on farming techniques that will carry us forward sustainably into an ever-changing, and, sadly, rapidly degrading world. ○

Ed Mendoza assists in the teaching of a two-week indigenous permaculture course in New Mexico. He lives and works in southern Arizona. tnafa-az@casagrande.com

*Permaculture Education & Certification
A First Person Account*

UNDER THE WALNUT TREES

A Reminiscence of the Permaculture Design Course in Ojai, June 1997

by Susan Newcomer

The land occupied by the Happy Valley School and the Ojai Foundation has a beauty that comes from its unique location in isolated mountains near the relentless urban sprawl of Los Angeles. The beauty of the upper Ojai valley made it a logical selection as the site of the fictional Valley of Shangrila in the 1939 film, *The Lost Horizon*. As I arrived in Ojai's upper valley on a late afternoon in June, hawks soared overhead and wisps of fog slipped over the mountains in the gathering twilight. In the quiet of a Sunday night,



Photo by Terri Dunivant. Temenos Teaching Gardens

drought-tolerant crops. We are learning from the past, working with some ideas that come to us from over time, distance, experience, and personal observation of nature. Sometimes I work in the field all alone as the sun sets. Sometimes I wonder who cares about what's going on with nature, food production and the spirit of the land — out here one can feel isolated from the rest of the advocacy community. As for me, I work and touch the earth, and that makes doing this work worth the

it was apparent that the next two weeks of permaculture study would take place in an ideal location.

On the top of a scenic ridge, the Ojai Foundation land is covered with California live oaks. With the rustic ambiance of a summer camp, the Ojai Foundation is an ideal place to retreat from everyday life and to focus on the study of permaculture. Walking each morning down the hill to a large tent, where the permaculture lectures were held, was an invigorating start for each day. The evening hikes back up the hill to the Ojai Foundation featured the nightly roll call of coyotes and skies filled with stars.

Beginning with the first day of class, it was clear that a permaculture design course teaches more than a set syllabus of material. One of the first lessons we learned was that 100 people, taken from their familiar surroundings, could coalesce into a community. When someone suggested the idea of composting the food waste from the group's meals, a crew immediately assembled to dig a compost pit. Buffet meals, eaten under ancient walnut trees, became the focal point for fascinating conversations. A realization quickly dawned that we had all been independently thinking many of the same things regarding the need for sustainable community, appropriate technology and alternative solutions to many of the world's thornier problems. Mealtime conversations became one of the best aspects of the permaculture design course experience.

The organizers of the course utilized a variety of appropriate technologies to provide services for the course participants. There was an innovative form of air conditioning that included a large tube, with fans pumping cooler air out of a hole dug in the ground. For heating dish water, there was a solar water heater placed in a strategic location. There was also a shower set up, erected for use by the students who camped in tents. The shower stalls were made out of bales of straw. After a few days of the course, it was easy to conclude that one could live comfortably under rustic conditions with appropriate but minimal equip-

ment.

The founder of permaculture, Bill Mollison, lectured during many days of the course. Along with his humorous stories and iconoclastic tall tales, Mollison included many pearls of wisdom on the subjects of trees, forests, water usage, domesticated animals and the perception of patterns in landscapes. His co-instructor Scott Pittman brought a dry wit and years of experience in the design and construction of adobe, cob and strawbale buildings. Pittman also taught the class how to dig the water-catching trenches known as "swales." Even though much has been written, including several textbooks, on the subject of permaculture, there was great benefit in learning about these topics directly from teachers with years of experience.

In addition to the formal classroom lectures, course participants received the additional benefit of learning from our peers during evening presentations. Each evening, our fellow students shared video tapes and other materials, with any interested classmates. Included in the evening programs were lectures on community-supported agriculture, architectural applications of fractal geometry, eco-feminism, sustainable forestry, inner-city gardening projects, and a humorous, but serious, video that depicted a cross-country car trip using discarded frying oil instead of diesel fuel. The various evening programs were informative and they complemented the material covered in the permaculture course curriculum.

After a week of lectures, we moved out onto a ridge at the Ojai Foundation. Armed with shovels, we learned the art of digging swales. The somewhat archaic word "swale" refers to the terracing of the hillsides for the purpose of capturing water run-off and avoiding damaging erosion. With the use of simple leveling tools, made from bamboo and a "plumb" line with a rock as a weight, it was possible to dig the swales while following the contours of the hillside slope. Before we ventured out to dig swales, we learned that the U.S. government, during the WPA projects of the 1930s, put in many large

swales in the arid regions of the Western United States. These landforms may be seen today, still working correctly after nearly six decades.

The culmination of the permaculture design course came when the students were divided into teams with the intention of creating a landscape design for use by the organization that owns the land of the Happy Valley School and Ojai Foundation. The land was divided into two sections, with four design teams focusing on each section. The design teams studied aspects of gardening/agriculture, water, physical structures, and the invisible structures of administration that make the other aspects of the design possible.

As individuals and as groups of design teammates, we walked the land. In our study, we observed signs of water flow, noted the slope of hillsides and looked for potential that could be worked into the completed permaculture design. After the preliminary observations were completed, each design team met to produce maps and reports on their area of study. The result of all of this labor was a meeting for the entire class in which the teams presented their completed designs to the land's governing board.

After the lectures, design meetings and other activities, the permaculture course came to a close with a talent show. On the last two nights of the course, there were mandatory talent presentations by all of the course participants. These talent shows included diverse performances such as the singing of "Robbie Barley and the Swalers," as well as a dramatic peeling of an orange by an organic cotton farmer from Texas. The talent shows demonstrated the evolution of a community that came together for two weeks with a common interest in permaculture's ethics of care of the earth and care of people. Attending a permaculture design course can be a great opportunity to learn useful skills, to acquire unique information and to renew a commitment to integrate life and work in the service of permaculture's ideals. ○

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Permaculture Credit Union by Vint Lawrence

It's Eleven O'clock. Where Is Your Money and What Is It Doing?

That Is The Question. Everyone seems to need it. Everyone uses it. Everyone wants to have more of it. But, for those who care about the health of the planet and seeks a sustainable future, the important question is, "Is your money working for or against the future that you envision?"

A Possible Answer

The Permaculture Credit Union, the first to be created in New Mexico in 30 years, is possibly the first credit union to be founded upon the Earth Care ethics of permaculture: respect for natural systems, respect for people, and no waste. In banking, this means the reinvestment and recycling of surplus back into the community via loans that encourage environmentally conscious practices. Many people have heard of permaculture in relation to farming, gardening or landscaping techniques. But the ethics of permaculture can be applied to all systems that sustain themselves, including building a house, operating a business, or managing and investing financial resources, as well as growing a garden.

The Vision and The Mission

What the volunteers and staff of the PCU have been working to create is a financial service model that operates in parallel with the values of the members and strives to support their vision of life in partnership with nature and the principles that support and nourish living systems. The task is both simple and complex: to steward the community resources that have been placed in their care, to apply and invest these resources in people and projects that enrich the communities in which we all dwell, to educate our community about these endeavors and ethical principles, and to create a model that will transform the nature of financial institutions and transactions in a way that supports life. The mission and purpose of

this new enterprise is to pool the financial resources of people who subscribe to the ethical principles of permaculture and to provide a financial vehicle that will allow these resources to be put to work creating a sound, sustainable, environmentally responsible future.

The founders of this credit union believe they have targeted a market that is severely underserved by existing financial institutions, namely, those people who are committed to a cleaner environment, healthful food and water, sustainable energy use, and a more conscious lifestyle. The Permaculture Credit Union creates the opportunity for its members to control the use of their money in the community and contribute to the revitalization of local well being while promoting environmentally sound, earth-friendly technologies and practices.

A Place And Respect For People Who Care

The PCU office is in Santa Fe, NM. It's not fancy, just the basics. Don't expect the ostentatious décor of a fancy national mega-bank. What you will find are friendly and helpful folks who are assisting members to open accounts and take the first steps toward having some control over the way their money is invested and used for the things they believe in. You can expect that they will learn to recognize your name and voice on the phone.

How Different Can It Be?

The Permaculture Credit Union provides an important precedent in the financial world, namely the financial tools and capital dedicated to supporting environmentally sound practices, technologies and businesses.

- There are private individuals who would

seek loans for ecologically friendly, solar electric, hybrid, fuel-efficient cars if banks would only lend for such expenditures.

- There are homebuyers who would seek mortgage financing for non-toxic, innovative, environmentally sustainable houses if only lenders were willing to support these emerging trends.

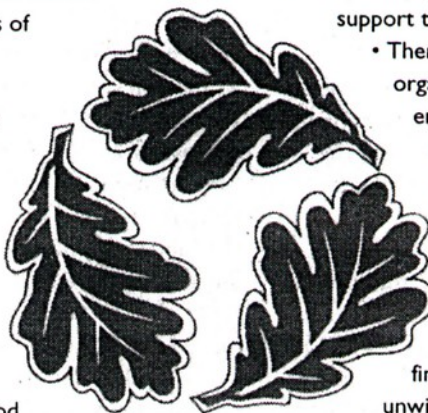
- There are green builders, organic growers, innovative entrepreneurs in solar and wind energy who are undercapitalized and need loans in order to grow, prosper, and promote these ideas and enterprises.

Generally traditional financial institutions are unwilling to lend money to projects and enterprises that fall outside the normal, "business-as-usual" parameters of their current loan portfolios. These institutions are partially responsible for the slow pace of innovation and broadscale acceptance of permaculture, including "Green Building," and ecologically sound farming practices.

The PCU is addressing this problem by making loan monies available in these areas. Beyond providing financial services at fair rates, this cooperative venture gives members the satisfaction of knowing their money is being used by others with whom they share a common bond and in activities and projects that are consistent with and supportive of the ethics of permaculture.

Who Are The Members?

As of this writing, the PCU has approximately 220 members and over \$1 million in total deposits. This result is consistent with or exceeds the goals set in the original business plan last fall. As a result of reaching this landmark, the PCU sent out a survey to the membership to determine the appropriate products to offer as an expansion of the loan program. In general, the written responses in the survey indicate that members are social progressives and are environmentally conscious. When asked



how they would like their money directed, why they joined the PCU, and how they would describe themselves, common words and phrases were: sustainable, restoration, ethical, ecological, environmental, earth-friendly, green, gardens, self-sufficient, organic, alternative energy, and values. The members have or want to acquire land. They want to know where their money is going specifically. They have many diverse ideas for spreading the word about the PCU and enrolling new members.

It is clear from the survey responses that what members want is an institution in which to place their savings that utilizes their money in ways that are aligned with their values, that is a safe investment that pays a reasonable rate of return, and is user-friendly.

What's Happening Now?

In addition to offering savings accounts, share-secured and signature loans, and a range of competitively-priced CDs, the PCU is initiating an expanded loan program that offers discounted interest rates for fuel-efficient cars and "green" home improvements, providing personal loans to reduce the credit-card debt of members, and will soon be developing expanded services that will provide more immediate and convenient access to members' financial resources. In addition, they have recently hired a full-time CEO with experience in lending and operations. This will move the PCU forward in their ability to manage growth and allow them to service the growing demand for an ethical and ecological financial institution.

How Can People Join?

Membership in this credit union is for those persons who have completed a Permaculture Institute-recognized permaculture design course, are members of an affiliated regional permaculture institute, and/or who subscribe to the ethics of permaculture.

For current information on becoming a member contact: The Permaculture Credit Union 4250 Cerrillos Road Santa Fe, NM 87505 505-954-3479 Or go to www.pcuonline.org. ○

Vint Lawrence is Chairman of the Permaculture Credit Union, as well as a Permaculture Designer and Teacher. He lives at his Permaculture Design Ranch in New Mexico.

DESIGNING CARE

A Conversation between Susan Parenti & Patch Adams about Health Care, Permaculture, and Humor

...a theory of permaculture that shows care for people as well as the biosphere...But the dynamics of an ecosystem are not that of a social system, or are they?" Rob Scott, student, School for Designing a Society

Patch Adams: Susan Parenti and I work together on two distinct but connected projects: The Gesundheit! Institute in West Virginia, and The School for Designing a Society in Illinois. Both are based on premises foreign to the current social system; thus, we consider these projects revolutionary. For a long while I spoke, publicly, of creating a social system "based on peace and justice." Now, for the past year, I've added "and based on care." This is because care — medical, social, political, environmental — has long been ignored as a requirement for humane life. In the following article we present our projects

— their premises, their hopes for consequences — and our attempts to design care.

"I ain't gonna study war no more..."

Susan Parenti: In the past eight years I've been an organizer and a teacher at the School for Designing a Society, as well as a performance partner with Patch Adams. The School, located in Urbana, Illinois, is an on-going experiment in making temporary living environments in which the question, "What would I consider a desirable society?" is given serious yet playful discussion. This discussion then forms the basis for a variety of creative projects. Rather than orienting participants to find a comfy spot in the current social system, the School offers tools, time, ambiance, and company in

which people can imagine and design a system they would prefer. Participants live together cooperatively, discuss, write, take and give classes, make performances, and do experiments. Through these means, they explore the consequences of making their desires a basis for both learning and action. The concepts and skills developed through these activities are brought together in "design groups." In these groups we challenge the assumptions of contemporary society in order to explore how a better society might be designed. One of the ways we do this is to make "false" statements based on our desires. These statements are untrue in the present system, but would become true in another, differently designed, system.

Patch and I have given a lot of attention to the matter of care and how society's beliefs about it impact the

choices we make and the institutions we create. Care is a human need. Permaculture takes Care of People as one of its ethical foundations. But what do I mean by care? Care occurs when one person temporarily becomes part of another's (social/emotional/personality) structure. And what do I mean by need? I use the word "need" whenever I wish to speak of conditions that must be met continuously and unconditionally if living organisms are to be motivated to maintain themselves, their identities, their existence.

"In Permaculture, everything works both ways."

PA: A good deal of my passion for care comes from my mother and my friends, and from the circumstances surrounding my growing up. I spent my childhood and youth on army bases overseas while my father was away at war. Nothing about the military made me interested in it, ever. But my mother gave me tender loving care; she fully cared for me. A propensity toward science led me to think about medicine, a profession to care, and in my early teens I read the books of Tom Dooley, M.D., about his work helping in places where there was no medicine. These books were a hymn to caring. I liked his language, how caring is "thinking to do," and not with the implication that the cared-for were a burden. I believed (a mis-understanding, I later learned) that his being a doctor made him a caring person. After I became involved in medicine, I learned that a doctor's practice defines the healing interaction more than his profession.

My father was a soldier. Fighting two wars broke first his soul and then his body: I became a war orphan at age 16. I had already learned that violence is never intelligent, when, moving from Germany back to the U.S. and to the South in 1961, I became immediately aware of the racism in Virginia. I naturally took part in the Civil Rights Movement and still find it incomprehensible that every citizen didn't rise up and say: "We are all in this together. Stop this hatred!" During that time I realized our society was in a crisis of lost



Patch Adams

caring. This shout rose from every novel I read of the 20th century. Tom Dooley had shown me that it was possible to express care through one's actions, and from his example and from my own interests I was drawn toward a career in medicine.

When I finished medical school I began to see the strict, hierarchical, white-male-dominated institution—only recently integrated, that lay ahead of me: I knew I could not work in it. Fun and love were excluded, as well as any discussion of compassion or care. So far away from care was the medical

system that care grew to mean the best machines and drugs, and not an experience and action of compassion, generosity, intelligence, art, and foolishness.

SP: It doesn't take much to go a stretch and notice how in our society receivers of care are perceived as burdens. For, after all, what are they doing but taking? Burden permeates all language around care. It's assumed. Well-meaning book after well-meaning book asks how can we deal with the burden of care, who shall have the responsibility for care, how can we pay people enough to take on the burden of care. Care does not move in one direction only — from generous giver to unfortunate needy receiver, but in both directions at once; the giver becomes a receiver, and the receiver a giver. When I use the word care, I understand it as going in both directions at the same time. "In Permaculture, everything works both ways."

PA: Looking closely, I saw many glaring examples where loss of care—turning care into a burden as Susan would say—did horrible things to the practice of medicine: it became greedy; it became a business, with insurance companies and pharmaceutical and hospital suppliers swarming in for their share of the profits. Care is never where greed is.

The only saving grace within the greedy medical system was the health professionals who still cared. Yet whatever real care I found came from the nurses, orderlies, cleaning people, or volunteers—mainly people in lower paying jobs, most of them women. The rude, top-of-the hierarchy doctors got the most money (anyway before corporate medicine...) but gave the least amount of care. Care was clearly devalued. There was no insurance reimbursement for it. I believe care even got in the way. Yet, women are so reluctant to stop caring that many heroic women continue trying to bring care even to corporate medicine.

I knew that if I was going to play doctor, I would have to create a context, a hospital, where care wouldn't be penalized, a place where—as Susan

Looking for a Permaculturalist in West Virginia!

We are looking for vibrant people with a permaculture passion to join our community, the **GESUNDHEIT! INSTITUTE** in West Virginia. Primary is your exuberance for participation as well as your capacity to care for your own delight. Simultaneous is your 10-plus years of direct, full-time application of Permaculture principles with a focus on food production and energy-efficient buildings. Ultimately, we aim to be an example of generating our own food and fuel supplies. Untapped is our land's capacity to generate consistent hydroelectric power. Direct your first flirts to our land staff at 304-653-4438 or email greena@patchadams.org.

would say—my need to care wouldn't be suppressed, indeed, would be an essential expression of the healing situation. With the Gesundheit! Institute I wanted to address every problem in health care delivery and suggest alternatives based in care. I knew that individual health was inseparable from family, community, and social health. Therefore community problems, societal problems, and environmental problems all fell within the domain of health care delivery. And so from the perspective of giving care, poverty and justice became concerns of the Gesundheit! project as surely as illness, for the one could not be addressed without regarding the others.

SP: Care happens by design: when the needs to receive and to give care are linked. From our students at the school, who study and apply

permaculture ideas jubilantly, I've learned about that relationship called companion planting—plants help each other thrive when rooted down next to one another. So, for example, a plant that needs to grow in the shade and offers protection from beetles is placed next to another that offers to grow tall and can't abide beetles. Or, in the animal world: a garden offers a chicken room to scratch, seeds and bugs as food, shade, home range; while the chicken offers the garden aerated soil, fewer weeds and bugs, manure. This linking of needs and offers in the plant and animal world points to a method of design for the social world as well. Permaculture invites us to look at every element in all its functions. This leads naturally to understanding the way things work both ways. Design that links needs and offers ensures stability and sustainability, as the components of the system provide for each other. In

the social world no one wants to be a burden—no one. Older people willingly incarcerate themselves in nursing homes, in order to avoid seeing themselves as burdens to their children. Bi-directionality or mutuality eliminates the possibility of burden, because in a mutual system, each component plays the dual roles of benefactor and recipient. This idea of companion plants and animals has influenced my thinking about care. Are there other ideas from permaculture that show care for people as well as for the biosphere?

Susan Parenti may be contacted at sparenti@ux1.cso.uiuc.edu. Patch Adams at the Gesundheit Institute, 6855 Washington Blvd., Arlington, VA 22213. (Yes, this is the same Patch Adams whom Robin Williams played in the movie, "Patch!"). This was reprinted with permission from the Permaculture Activist.

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Permaculture Organizations local, national and around the World

Here is a list of Permaculture contacts, listserves, newsletters, courses seed and plant and more

South Coast Permaculture Guild covers Southern and Central California from Santa Cruz to San Diego. It is a group of Permaculture Guilds, Teachers/Designer and other groups join loosely together to organize and foster Permaculture Courses and

Education in each bioregion. The SCP Guild has a monthly email Newsletter for our region listing all the events both local, national and international. to subscribe email sbpcnet@silcom.com (805-962-2571)
We also have our own regional listserves main one can to subscribe to by going on the web: www.arashi.com/mailman/listinfo.cgi/scpg. The Guild is assisted by Santa Barbara Permaculture Network. See AD in This Magazine for all the contact numbers and emails of all the members of the SCP Guild.

North American Permaculture Contacts and Organizations

www.permacultureactivist.net
Permaculture Association Britain: www.permaculture.org.uk/
European Permaculture: www.permaweb.de/eurlist.htm
Permaculture International Australia www.nor.com.au/environment/perma/
Nepal: www.msnepal.org/partners/jpp/
Brazil: www.geocities.com/RainForest/1060/
Macedonia Rudina Permaculture Research

Institute Restoration of Refuge Camps: www.rudina.org.mk/english.htm

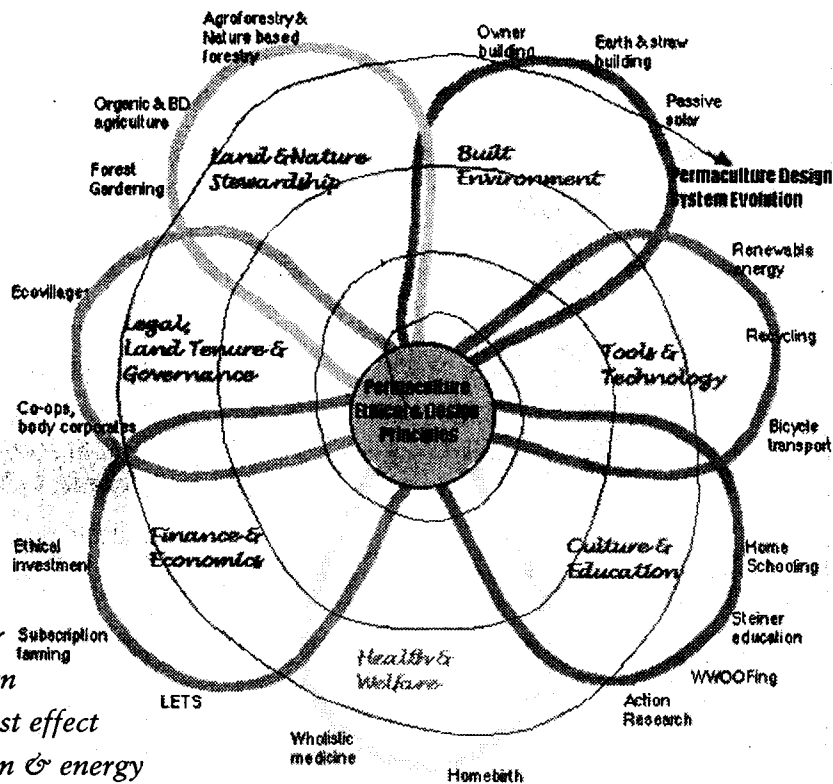
Global Ecovillage Network: www.gaia.org
Permaculture Website with great books references and steps for Permaculture site Design: www.ecodesign.com
Beginner's Guide to Permaculture a visual source www.landandliberty.co.uk
Permaculture Course ONLINE Dan and Cynthia Hemenway of the USA, assisted by Willem Smuts of South America and Tim Packer of New Zealand. at: barkingfrogspc.tripod.com/frames.html
Owen Dell Local Santa Barbara Sustainable Landscape Architect: www.owendell.com

Plant Nurseries and Seed Sources and Organizations for Permaculture Projects

The Theodore Payne Foundation for Wildflowers & Native Plants CA 10459 Tuxford Street Sun Valley, California 91352-2126.
Exotica Rare Fruit Nursery P.O. Box 160 Vista, Ca 9208 Plants/Fruit Trees from Around the World: www.bonusweb.com/exotica/
Oregon Exotics Nursery, Grants Pass Oregon, www.exoticfruit.com

Permaculture Principles

Small is beautiful
Work creates work
Everything gardens
Everything is a resource
Do only what is necessary
When in doubt, do nothing
Everything works both ways
Pollution is an unused resource
Work with nature, not against it
The problem is often the solution
Observe carefully before designing
Functions stack in hierarchical order
Include repeat functions in the design
Make the least change for the greatest effect
Increasing edges increases interaction & energy
Everything gives to the surrounding environment
The whole is worth more than the sum of the parts
Everything receives from the surrounding environment
Every element in a natural system performs many functions
The yields of a naturally balanced system are theoretically unlimited



What's the difference between Organic Farming, Organic Gardening and Permaculture?

Organic farming promotes natural fertilizers, making use of the natural carbon cycle so that waste from one plant becomes the food (fertilizer) for another. In organic farming, however, as with ALL farming, minerals are being lost from the farm every time a truckload of produce is carted to market.

Permaculture goes one step further than just replacing petro-based fertilizer with organic-based fertilizer. Permaculture brings the

people's wastes back into the cycle, and it reduces the energy wasted in transporting the foods by producing the foods where the people are. In permaculture, the people contribute in their daily life toward the production of their food and other needs.

Organic Gardening and Permaculture?

The Permaculture garden is more than an organic garden.

- It is also responsible for its waste: it aims not to pollute the surrounding environment

with excess nitrogen in the water systems, or weed seed in other natural systems.

- It uses design to minimize the gardener's chores and energy input.

- Visually this is the most noticeable difference between organic gardening and permaculture. In permaculture gardens ("home systems" is the more wholistic term), there is rarely bare soil; the conservation of soil and water is a high priority. There is a more complex use of space. Plants are allowed to set seed,

are inter planted for pest control. You will be unlikely to see plants in rows.

The permaculture system aims to maximize water, sun and other natural energies (e.g. wind, dust, leaves, bird droppings).

- The permaculture system aims to provide nutritious food and habitat for people and native animals and birds.

[\[http://www.ozemail.com.au/~askpv/organic-perma.htm\]](http://www.ozemail.com.au/~askpv/organic-perma.htm) ©
 Leisure Coast Permaculture
 Visions]

Chili pods wintered over,
shriveled like old toes in a bath--
their stems brittle as amber
that would snap apart at the touch.
They will save in Tarahumara baskets
for seed and grinding.

Aztec blue corn, dried on the stalk.
We let the weeds get away.
Rodents and crows had their share.
I rub each cob in a wringing motion,
old calluses wake up.
Kernels fall into the pan,
pinging like hard rain
on the metal roof.

Saving these seeds, I feel a peace
that many lives got what they needed
and gave back.
A micro-landscape was fed and enlarged.
When these night-blue kernels
rub my fingers raw,
I am tired.

I'm mad it hurts.
and I want to stop.

My mother's, husband's faces appear.
I go on.
This corn came heirloomed,
grandmothered and grandfathered,
to me, us.
The corn breathed air, drank water,
smaller lives ate the compost,
their shit and heat and life made the
humus that fed it.
We will eat.

The soreness will go away.
My hands twist and rasp
one cob against another.
I reach for two more
from the basket piled high
with the day's work.

Margo Tamez's work has appeared in American Poetry Review plus many others, and is forthcoming from The Missouri Review, Milkweed Editions, and Minnesota Historical Society Press. Her book of poems, Naked Wanting, is forthcoming from the University of Arizona Press. She lives on 3-1/3 acres in southern Arizona with her husband, Ed Mendoza, and their three children.

LA PERMACULTURA

Una vía para alcanzar la sostenibilidad ecológica del planeta La Permacultura es un sistema de diseño para la creación de medioambientes humanos sostenibles. El objetivo es crear sistemas que sean ecológicamente sostenibles, económicamente viables, que satisfagan las necesidades, no exploten o contaminen y que sean autosuficientes a largo plazo.

La permacultura trata con plantas, animales, construcciones, infraestructuras (agua, energía, comunicaciones), pero no solo como elementos en sí mismos, sino como se relacionan entre ellos.

La base es la observación de ecosistemas naturales, junto con la sabiduría ancestral de los pueblos primitivos y el conocimiento científico. Se trata de utilizar las cualidades inherentes de las plantas y los animales combinadas con las características naturales del paisaje y las estructuras para producir un sistema que soporte la vida en la ciudad y en el campo, utilizando la menor área posible. Se trata de trabajar con la Naturaleza y no contra ella.

La Permacultura aprovecha todos los recursos, y aún la mayor cantidad de funciones en cada elemento del paisaje y la mayor cantidad de elementos que sean posibles en cada espacio vertical y horizontal. El exceso o desecho producido por plantas, animales y actividades humanas es utilizado para beneficiar otras partes del sistema.

Las plantaciones se diseñan de manera que aprovechen bien el agua y el sol y que bloqueen el viento. Se utilizan asociaciones particulares de árboles, viñas perennes, arbustos y plantas rastreras que se nutren y protegen mutuamente.

Se construyen espejos de agua y otros elementos para aprovechar la gran diversidad de actividad biológica en la interacción de los ecosistemas.

La implementación de un diseño de Permacultura requiere flexibilidad y una apropiada secuencia para que puedan realizarse cambios en la medida que la observación y la experiencia lo requieran.

Crear un ambiente en Permacultura es un proceso largo y gradual, se utilizan técnicas y principios de la ecología, tecnología apropiadas, agricultura sustentable y la sabiduría de los pueblos primordiales aunque esencialmente está basada principalmente en la observación directa de la naturaleza del lugar.

Dos diseños en permacultura o cursos de entrenamiento no pueden ser iguales. Desde 1981, cientos de personas han participado en talleres de Permacultura, seminarios y cursos de diseño. El trabajo de los graduados de esta indefinida red global le ha dado alas y ha acrecentado la comprensión y apreciación de los patrones de la naturaleza y ha generado modelos para una vida sustentable que incluya máxima productividad con mínima tarea.

Taken from the following website <http://www.7generaciones.org/> 7 Generaciones es una reciente organización sin fines de lucro, con sede en Arachania (Rocha), Uruguay. Está formada por un equipo interdisciplinario, y fue creada con el fin de desarrollar actividades basadas en la permacultura e inspiradas en ecoaldeas, pensando en el bienestar de las próximas generaciones.

GLOBAL SUSTAINABILITY REPORTS

What makes a culture sustainable? How do different countries and cultures organize themselves to best benefit the people living there? In this column we will view different models of sustainability as seen through the eyes of those traveling or living in different lands. We will rely not only on students and designers of permaculture, who focus on ecological design, observing natural systems, agriculture and culture; but on others who specialize in sustainability projects. Hopefully we can learn from these models (whether they are deep ecology, permaculture, ecovillages, or traditional cultures) so we may implement these very positive solutions into our own communities. We encourage readers to submit their own observations for future columns. — Editor Margie Bushman (sbpcnet@silcom.com)

SUSTAINABLE COMMUNITY in Ladakh

by Morag Gamble
Crystal Waters

Permaculture Village, Australia

We often talk about living sustainably, about creating sustainable communities and villages — but what does a sustainable society actually look like?

The following account of traditional Ladakhi society describes aspects of life in this Himalayan region until just a few years ago (which still exists in some remote villages). It may not have been a life of luxury and ease, but it was definitely one of meaning and quality. The Ladakhi way of life provides much inspiration and direction for the future and offers an example of what it means to live sustainably.

Ladakh (also known as Little Tibet) is situated on the western edge of the Tibetan Plateau, a high-altitude desert. It was once a kingdom in its own right but is now part of the Indian state of Jammu and Kashmir, a strategic mountainous zone nestled between Pakistan and China.

For centuries, Ladakhis lived a sustainable way of life almost completely isolated from the rest of the world. Self-

reliance was achieved because people worked co-operatively and their skills, passed down through the generations, were finely tuned to the local environment.

Ladakh has a short growing season of only four months. For much of the year, the landscape is covered in snow and is bitterly cold (reaching as low as minus 45 degrees Celcius). However, in the short summer period, Ladakhis were able to produce enough food for the entire year, using only human and animal labour and very simple technologies (such as the water-powered stone-grinding grain mill). They were also able to produce a sizeable excess which was used for their animals over the winter, made into a local wine or shared with neighbours who may have suffered a crop failure. All this was achieved from small family-owned farms that were generally about three hectares in size.

In these farming villages, there was no waste. Everything came from the

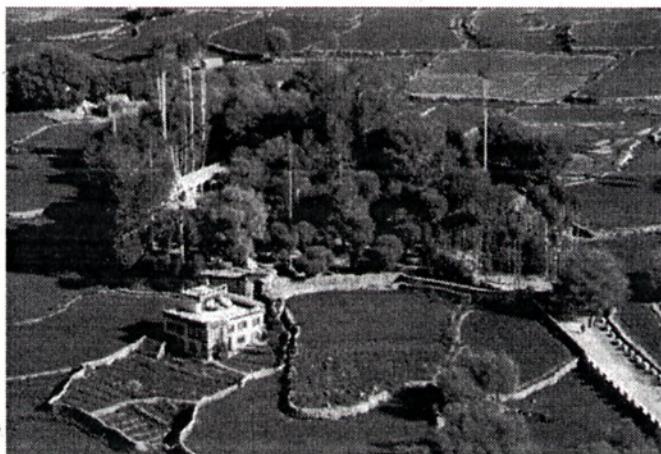
The daily flow of life integrated work and leisure without differentiation. Work was generally carried out in co-operation with other members of the family or village community, and tasks were interspersed with regular breaks to socialise and relax. All ages worked together, learning from and caring for one another. Everyone was useful and played an important role, from the youngest to the oldest, participating how they could. Unemployment was unknown.

Even though the methods used were slower and the work was done at a relaxed pace, everything that needed to be done was done. All the vital needs of the community — food, shelter, clothing — were satisfied in this way and were provided for using resources from within the region.

The cultural life of Ladakh was rich, colourful and participatory. Entertainment was provided from within the community and festivals occurred regularly with celebrations often lasting

for days, especially during the winter when there was no farming to be done.

Ladakhis lived in extended families. The older generations were always included, the young had many caregivers and parents had much greater freedom. These families lived together in large, graceful homes designed to suit the local



During the summer, the landscape is like a mosaic of green. Small organic shaped fields have been built up over centuries from the desert. As there is less than 4 inches of rain a year, water is collected from the melting glaciers and is fed to each individual field via an intricate and co-operatively managed irrigation system.

earth was used and reused efficiently, and eventually returned to the earth, in a balanced cycle. The relationship between people and the earth was strong. The living experience of interconnectedness was reinforced daily by the spirituality, value systems and traditions of the community.

climate and made from locally available materials. The houses and their farms were passed down from generation to generation, and since fertile land was a limited and valuable resource, the population was consciously kept relatively stable.

In a harsh landscape and climate, the Ladakhis were not only able



This is the typical type of housing in farming villages of Ladakh. Generally houses are 3 stories and clustered together. They made of local materials - sundried mudbricks, riverstone and coppiced timber. The roof is flat for drying and storing. Recent additions such as the glass sunrooms help to make life in the subzero temperatures during winter more bearable.

to survive but to prosper through the mindful management of resources. They provided for themselves without depleting the natural environment or opportunities for future generations and other living beings.

The traditional culture and practices of Ladakh demonstrate what it means to live sustainably (with regards to work, food, housing, community co-operation, education, security, economics, etc.), and there are many lessons we can learn from this wisdom.

In the past few decades many changes have occurred in Ladakh as a result of *progress* and *development*. But, Ladakh is not alone. Around the world the devastating impacts of the Green Revolution and globalisation can be seen in the displacement of traditional farming cultures, degradation of agricultural land, rural depopulation, and the undermining of

local self-determination amongst other things.

Permaculture, inspired by observation of natural systems and the practices of traditional cultures such as Ladakh, works to assist communities to restore the damage that has occurred and gives value once again to traditional ways (having often been discarded as being primitive and backward). Permaculture is a holistic system of environmental planning and design that teaches people the skills to develop strategies for sustainable land management, the restoration of local environments and soils, and the strengthening of local

communities and economies.

Permaculture also encourages people living in Western cultures to closely examine their current way of life and to find new ways forward which embody the ethics of earth care, people care and fair share.

I believe that at this time, more than ever, we need positive, peaceful, solution-oriented approaches which give hope to us all, especially the younger generations. The best contribution we can make is to begin work towards sustainable living in our own lives, communities and environments. "Be the change you want to see in the world" Gandhi once said. Permaculture offers some key tools (ecoliteracy and ecodesign) to help us restore the skills that will help us to become these agents of positive change.

Morag Gamble lives at Crystal Waters Permaculture Village in

Queensland, Australia. She and her partner, Evan Raymond, are international permaculture design teachers and consultants, ecoliteracy curriculum developers and sustainable village development consultants. Their commitment to their work is inspired particularly by the time they spent living and working with traditional farming communities in Ladakh, India, Indonesia, and Korea. For information about Permaculture Design courses or to contact Morag: morag@permaculture.au.com www.permaculture.au.com. ○

SUSTAINABLE FUTURES Morag Gamble and Evan Raymond 50 Crystal Waters MS 16 Maleny QLD 4552 AUSTRALIA ph/fax: +61 0(7) 5494 4833 courses@permaculture.au.com www.permaculture.au.com



Morag with the amale (mother) of the house taking a snack break during harvest time in a remote Ladakhi village. This was the first year of the Farm Stay program which we were trialing in 1995. The bread is cooked in a dung fired oven, using only stoneground locally produced organic grain, dzo yoghurt as a rising agent and riverwater. We dipped this in a spicy bean and vegetable soup.

continued from Eco-Elder column (p.35)

consumerism, which they can never experience.

Many in the voluntary simplicity movement report feeling richer with less, and take delight in exercising imagination and creativity to consume less and recycle more.

My hero Henry David Thoreau said in 1850: "Simplify, simplify, simplify." An increasing number of North Americans are consuming less, recycling more and becoming part of a new movement. A local example is "Eric the Green" [Eric

Greening] who hasn't owned a car in over two decades but gets around by bus, walking and hitching rides; he is always at the SLO Board of Supervisors educating the rest of us — a role model I try to emulate. Voluntary simplicity is a new, unique trend — one whose time has come as our resources become depleted.

A few things you might do:

1. AVOID YOUR CAR
2. AVOID SHOPPING
3. GET RID OF YOUR LAWN

4. TURN OFF THE TV.

5. LAUNDRY: Hang your wash in the sun.

The Chumash lived on the Central Coast for about 10,000 years. Our civilization has been here for less than 300 and, in my opinion, our time is running out. Voluntary simplicity might give our grandchildren a future. ○

Bill Denneen 1040 Cielo Lane Nipomo 93444; bdenneen@slonet.org



Some Christmas Peace Offerings

Although the September disaster at Twin Towers still burns in our hearts and minds, I think a Renaissance is still possible if we do not wage a war. I believe there are still hopeful prospects for it although it will take longer and be harder.

As I see it, we Americans suffer from a host of difficulties: unprecedented wealth, over-consumption, fear, and resentment. We also suffer from poverty, hopelessness, joblessness, frustration, and violence. I feel our struggle for peace must deal with these issues directly, right here in Santa Barbara. Until we address them we cannot be alert, informed citizens who are capable of caring for ourselves and the general welfare. It seems to me healing is the way instead of punishment and it begins, but does not end, in Santa Barbara. Here are some projects we can take into our neighborhoods. I believe working together brings us challenges, fraternity, and valid hope. And all of them are legal.

A SAFE AREA TO CELEBRATE DIFFERENCES

We need a safe area where people of opposing views can meet to describe their points of view and there can be a broader understanding of them. Each can come to listen to one another. If they

really hear each other, they will discover for themselves there are seeds of truth on each side.

Here are some topics to experiment with in a listening process.

Pro-life versus pro-choice. Individualism versus community. Peace as a healing process versus a political process. Capital punishment versus rehabilitation and custodial care.

HISTORY FROM GREAT AMERICAN LITERATURE

We could read the Federalist Papers, the works of Thomas Paine and Thomas Jefferson, our Bill of Rights and our federal constitution. Then we should come together to discuss them to see how they apply today. We are fast losing touch with these, and war and peace can have different meanings as a result of this study.

A CELEBRATION IN SCHOOLS

In the forties there was a book called *The Springfield Plan*, initiated in the schools of Springfield, Massachusetts. Each month in assemblies, the schools of Springfield would celebrate a different racial or ethnic group in its school. They would present its customs, history, heroes, costumes, foods, and dreams. They also presented the contributions their particular group had made to the United States. After these days of celebration,

children saw one another in totally different lights. I'd like to see such programs in our schools today, with children helping to create it.

RESPONDING TO GRIEVANCES

I believe that violence erupts when people feel they will never be heard, and their grievances will never be addressed. So I propose we develop we develop one or more Compassionate Listening Teams to listen to the

grievances and suffering of any group which feels it's unjustly treated. Listening groups can also canvas neighborhoods to learn what people think and feel about issues today. It's amazing to walk a few blocks, knocking on doors, and asking the person whether they see suffering in Santa Barbara, what they think our government can do about it, and what they think they can do about it. And then invite them to discuss it in your homes.

CONCERNED CITIZENS FOR CREATIVE ALTERNATIVES

Last, I urge us to come together when our government presents initiatives we feel are wrong. (England calls this Shadow Government, so does Arianna Huffington!) It means we concerned citizens set up an alternative Listening Post where we can deliberate on initiatives we don't approve and work out creative alternatives to them. For example:

We come together to consider what appears to be happening in Bush's declaration of war — that people are "guilty until proven innocent." This is invalidating our long held assumption that "people are innocent until proven guilty." After we develop a satisfactory alternative, we try to publish it through email, websites, the internet, radio, TV and newspapers — if these don't work, we make fliers, walk through our neighborhoods, and deliver them by hand, door-to-door.

We're creative people. We can make differences in this amazing age. ○



Photo by Teri Dunivant

Larry Santoyo (santoyo@earthflow.com)



lots,
road-
ways
and
land-

scapes for harvesting run-off water. Basin and berm structures (called swales) and cisterns are constructed to collect this run-off water and convert flooding problems into helpful resources of drinking water and low cost irrigation.

For economic development, Nature's model of resource efficiency is used again. Creating community development plans is probably Permaculture Design's best application. In this process an inventory is meticulously prepared, examining a community's basic needs, and cross referenced with its renewable resources. Needs that are not met by local resources are considered job opportunities for the community. Only those resources surplus to local needs are made available as sustainable commodities for sale and trade — thus creating a stable economy based on real need and renewable resources.

"Mixed use" zoning closely mimics natural systems and is highly recommended for community land use plans. Designing residential and commercial zones into clusters allows large areas of open and wild space to remain intact. This creates an access by proximity design allowing people to live, shop, work and recreate in the same proximity. Transportation and traffic problems are greatly reduced. Suburban and urban consumers can also help conserve resources and link directly with nearby farms and other rural enterprise.

Permaculture Design offers a natural, practical and inherently economical way to model our homes and communities. Permaculture also offers hope — as it effectively bridges the gap between development needs and true ecological sensitivity. ○

Larry Santoyo is among the most experienced Permaculture Designers and Teachers in the US. He is now forming a land partnership group to create a Permaculture MicroVillage on California's Central Coast. He is available for consultation and design services. Contact him at 800.469.5857 or santoyo@earthflow.com

An Introduction to Permaculture: Economic AND Ecological Growth

Imagine living in a place that is blended into the natural environment. Your home is not only naturally heated and cooled, but is elegant and affordable. Integrated into the surrounding landscape are natural water systems where food is being grown safe from harmful chemicals, and waste is managed for productivity. A place where the neighbors, young and old, routinely help one another. There is less traffic, less pollution and more open spaces. Leisure time becomes abundant and recreational opportunities are close at hand. Also imagine that, as a result of its design, this place saves you money, and, most importantly, it saves the Earth its precious resources

Through the simple and practical strategies offered by Permaculture Design, a village lifestyle like this is not a dream. Permaculture mimics nature: total resource efficiency is accomplished by managing waste for productivity and balancing its consumption with contributions from each of the elements in the system. Permaculture brings to homeowners and design professionals an innovative approach to planning, landscaping, building and retrofitting.

Coined by Australian ecologists Bill Mollison and David Holmgren, "Permaculture" is a contraction of the words "permanent and culture"; it is a highly developed Art, Science and Philosophy. Regional groups and colleges teach Permaculture Design, and design firms throughout the country are now offering Permaculture services. Permaculture Design sciences are now used by homeowners, architects, land use planners, landscape designers, farmers and community service organizations world-wide.

Permaculture groups train designers in simple techniques to "read the patterns of the landscape" and methods that "turn any problems into resources." Permaculture designers consider that every property has a unique pattern of natural characteristics. Proper alignment with these natural patterns is the basis of the permaculture process. Using Permaculture Design, human

ecosystems (development) can model nature's patterns of multi-function and inter-connections, making it as sustainable and resilient as a forest system.

Instead of the "one size fits all" approach, Nature is allowed to direct the land use plan. By skillfully using permaculture methods of site analysis and evaluation, elements (such as buildings and roads) and practices (such as farming and forestry) are established only in areas with optimum conditions — working with nature in an efficient and economical way. Elements are placed not in isolation, but in relation to the dynamics of the total site. Proper placement is achieved when an element or a practice is designed to interact efficiently with all of the influencing elements. To do this, permaculture designers use simple physics and biology, as well as specific observation skills.

The permaculture designer treats the built environment and the natural environment as a whole. Houses are designed not only for optimum solar advantage but are carefully sited away from sensitive areas. Prime agricultural land and wildlands are protected. Precautions are taken for the predictable threats of fire, flood, wind, and cold air drainage. One of the primary objectives in permaculture is for designers to develop simple biological alternatives to reduce the need for the expensive and resource consuming demands of high technology. Proper shading alone can reduce cooling costs, even in desert areas, by 20% or more.

Permaculture designers also learn to observe and research naturally occurring plant and animal assemblies (called guilds). This information is translated for use in sustainable farming. Perennial fruit trees, shrubs, and vines, together with livestock and commercial crops are selected to mimic natural assemblies — each plant and animal benefits the other, providing a permanent and maintenance-free resource system.

Comprehensive water and soil conservation planning are integral to any sustainable design. For water conservation and flood controls, permaculture designers use roofs of buildings, parking

South Coast HopeDance

Permaculture and Education

David R. White, PhD.

Teaching our children about the environment can become a listing of dire scenarios. Global warming, ozone depletion, pollution, topsoil loss, diversity loss and overpopulation provide a daunting curriculum. Permaculture design is an all encompassing, positive approach to the environment that students can easily understand and relate to. I have spent the last five years teaching a Permaculture curriculum for high school students at the Happy Valley School in the Upper Ojai Valley, Ventura County. This curriculum is land-based, hands-on and does not stop at the school's gates; rather it reaches into the local community through adult education on the land, seminars and slide shows. In this essay I will detail some of the teaching strategies I use.

One of my first lesson plans of the year for my environmental science

class is a visit to an undisturbed native climax community, in our case a hillside of coast live oaks. These provide a wealth of information to the observant. Perhaps most importantly, they providing the student with a clear understanding of natural soil production. Building soils by mimicking natural soil production through mulching provides a key hands-on component of this class throughout the year.

Another early lesson is to achieve an overview of the campus, from surrounding vantage points and maps, to distinguish on-site from off-site resources. The clear connection between fossil-fueled transportation for off-site resources, with all its attendant, multi-faceted problems, can be made at this point. Emphasizing and utilizing on-site resources is a key theme of this Permaculture class. Students design and build methods for using the on-site resources of sun, rain and food. Making A-frame levels and cutting swales or ditches on contour can be a fun and effective lesson theme, although extensive earth moving has to be coordinated with

other land management interests, most importantly weed abatement in our semi-rural location. There's no point in building swales which are disced over in the spring. An important aspect of Permaculture education is the coordination of land management. Teaching our grounds crew to disc and mow on contour, and providing low-growing drought-tolerant ground cover for them to mow, helps increase rain water percolation and reduce erosion at our site.

Producing food on site is an aspect of Permaculture design that many schools have embraced at least symbolically. Strawberries along a pathway

make a walk a treat. However, initial enthusiasm for garden construction can dwindle, especially if the garden is built far from paths well traveled. Small gardens would probably do best to focus on flower production with occasional food plants intermingled. Bunches of flowers on the administrators desk are a sure way to garner support. Perennial plantings are emphasized. The reality of producing its daily food needs is overwhelming for most schools, although successful programs exist at Midland, Pacific High, Oak Grove and Happy Valley schools. We have been most successful by leasing land adjacent to the school to an organic farmer. This interface has proven to be a fertile edge at Happy Valley, with students gaining from the farmer's input, and vice versa.

Tree planting has long been recognized as a celebratory marking of our lives on earth. Planting and caring for trees is a central focus of Happy Valley's Permaculture program. This private high school now has approximately 100 diverse fruit trees planted by students around its campus. This focus on perennial food production requires that appropriate trees are chosen and planted in places where they will thrive. This includes choosing trees that fruit during the school year. We have had success with apples, pears, nectarines, mulberries, walnuts, Asian persimmons and citrus. Our avocados are an experiment in micro-climates, planted on our south-facing, frost-draining hillsides. Burgeoning crops of apricots in August have little teaching impact on students during summer vacation, although the presence of a commercial kitchen could allow for value to be added to this food production through canning, drying or otherwise preserving.

Composting is another hands-on tool integrated into the Happy Valley Permaculture curriculum. It mimics the natural pattern of turning waste into food. For the science teacher, the compost pile provides many lesson plans, such as classification of soil biota. Composting completes the cycle between the kitchen and the land. Straw bales provide an easily maneuverable carbon source to balance the high nitrogen waste. Composting clean kitchen scraps is less messy than processing slops, although

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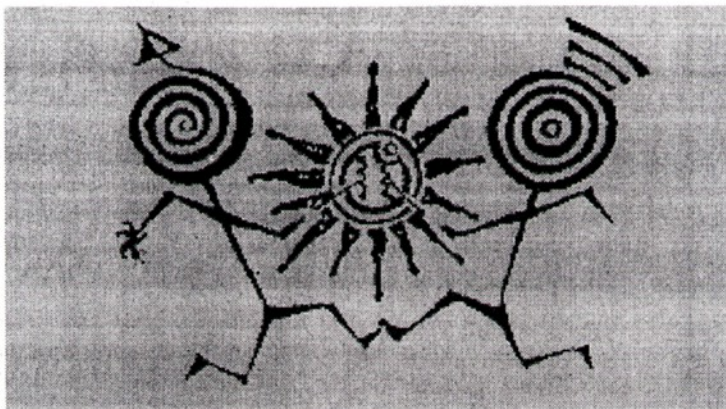
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Glass Tile

this could be done with appropriate space and management, perhaps in the form of a worm composting facility. As landfill space continues to become more expensive, the dumping of slops into trash should become a thing of the past and we should see more support for innovative green waste composting. An overview of green waste disposal becomes the purview of a Permaculture coordinator. The grounds crew cut brush and mow, but what happens to the trimmings. Are they trashed or burned?!

Most schools will have only limited funds available to support a Permaculture program. To ensure that students are taught a proactive approach to the environment, it is vital that all schools provide support for an effective environmental coordinator. Realistically, a successful Permaculture program will require some creative funding. Small grants are available for garden programs and other innovative teaching methods. The Hansen Trust in Ventura County funds school gardens. Amgen provides educational mini grants. Check with your county library for grant information. The Ventura County Community Foundation in Camarillo and the Santa Barbara City Library have the Foundation Directory for searching for grant information. Donations can be solicited from appropriate parties. Be bold about asking for funding; this is important work. Internship funding for key roles, such as composting or harvesting from the garden for the kitchen can encourage students to become more directly involved. Happy Valley School has links to the Evergreen College in Washington and Oberlin College in Ohio, who send students to teach and learn. This is particularly useful in January, when we prune our trees to prevent disease and damage from fruit overload.

A hands-on procedure which is both soil-building and mulching and uses on-site resources is the planting of soil-builder mix. Growing nitrogen-fixing legumes such as peas, beans and vetch and carbon-fixing cereals such as oats, barley or triticale creates fertile soil,

diverse habitat and provides mulch which students can cut with hand sickles and pile around their trees. Mulch is grown where it is needed, producing fertility locally. We also sow seeds of insectary plants such as calendula, and in a lesson



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on vegetative propagation we transplant lemon balm, rosemary, lavender, spearmint and peppermint, which attract beneficial insects and act as ground cover. Students are responsible for creating mini-gardens around each tree. On hillsides, they sculpt and terrace the landscape around the tree to maximize water percolation. Plans are based on staking out contours using bunyip, A-frame or builder's bubble levels. Disturbed soil is seeded for soil building and beneficial insect habitat, with emphasis on cuttings and seed collection from surrounding plantings. Earthworks are mulched where possible with cardboard, straw, wood chips and compost to augment the soil. Moving wheelbarrows full of mulch is a good workout for all students. Plantings are amended with mycorrhizae and the micro nutrients and minerals found in river sand, bone and blood meal.

Students fertilize their trees with feather meal which is 14% protein. Commercial growers aim for one pound of nitrogen per tree per year.

A basic principle of Permaculture Design is that of multiple functions from a single element. Using this template, experiments on seed germination can use food plants, such as tomatoes, which can then be planted out in the garden. Companion planting and plant guild creation can also be experimented with. Fast growing trees can be planted with vines, ground cover and root crops around them. The shrub layer can include the beautiful native ceanothus which is a nitrogen fixer. Plant guilds can also be setup in

large containers. Students learn about the seven layers of forestry and try to fill as many niches as possible. Ground covers of strawberry and mint with vines like kiwi, passion fruit or grape can be planted with a variety of different trees. Use caution planting fast-growing grapes; these will smother semi-dwarf fruit trees unless intensively managed on an annual basis.

Happy Valley School also has a



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Santa Cruz HopeDance

WHY DESIGN?

by Kevin Snorf

Permaculture is a design system. I keep hearing about Permaculture gardens or farms as if Permaculture was a recipe that was applicable across biotic communities. That's not quite the essence of it. Permaculture starts with an ethic, care of earth and people and distribution of surplus, and from there it designs systems, using principles that foster the health of our planet and people. If it does not restore life, it is not permaculture. Certainly there are techniques in permaculture, but they are not universally applicable. Everything is site-specific, and, for that reason, permaculture is a design system. In *Webster's Dictionary*, design is defined as "a working out by plan." Permaculture takes into consideration all the potentialities of our system and designs our farm, garden, building, economic system, lifestyle, etc. so that the obstacles are removed by plan.

I am at the crossroads of becoming a designer. I want to design more than anything else. It's infectious. I go to sleep designing. Everything is a design challenge to me. Although I am an inexperienced designer, I want to offer some thoughts that I have found helpful to catalyzing my journey into permaculture design. I study psychology, specifically ecopsychology. What I have been observing in the permaculture community are the barriers to, limitations of, and yields of design and how they affect the individual designer. Mostly, I am concerned because we need more good designers. But there is often a reluctance of permaculturists to step forward. If we can identify the internal, psychological path to becoming a designer and its obstacles, then we can better facilitate and catalyze the social movement of appropriate ecological design.

I know the beginning stage of design all too well. Most often, the beginner is wrapped up in the slings and arrows of

ego-centrism. I find myself chanting over and over again, "I won't be good at this. I don't know enough yet. I won't find work. People won't hire me. Nobody will like or understand my designs. The problems are too big and numerous." This is the stage of self-doubt, and understandably so. However, perhaps we are not afraid of how inadequate we are, but, as Nelson Mandela says, we are more afraid of how great we can become. A designer, Ben Haggard, once told me the greatest obstacle in design is deciding for ourselves our worth as designers. I find worth comes with confidence, and confidence comes in practice. We learn best by making good mistakes and by striving for things greater than our ego. Design offers us that challenge.

The experienced designer runs into society's obstacles. In sociocentrism, a lack of capital to take on major projects or a lack of social interest, investment, or understanding can be a problem. Here, we face the intrinsic frustrations of capitalism. How can I make a reasonable living through righteous work such as



not ones I am prepared to answer. But my hunch is that we have to understand and place more social ecology into our designs. Take Bill McDonough's natural office buildings where the workers have, "Thank God it's Monday" parties because they can't wait to get to work. Or co-housing where the design of the subdivision enforces and encourages community. In both cases the design takes the emphasis off things and puts them on relationships. Now our designs are growing communities, not just food, fiber, or shelter.

SAVE THE SWALES

PERMACULTURE DRYLANDS INSTITUTE

design, and not get stuck catering to an upper-class market, when the lower class scenarios are often more needy? How do I create a sustainable society using lots of resources and capital in the design process and implementation? Do I compromise my design to get the job? Where do we turn to show our clients the long range success of our design strategy when the strategy is so new and young? The toughest question at this level is how do I encourage the clientele to adopt a sense of collectivization and sustainability — crucial to the future prosperity of the planet — when the whole industrial culture is bombarded by propaganda of individualism and consumerism? These are tough questions and

The final challenge is to awaken an effective, mobilized, global design movement that addresses the biosphere as a global organism. This is the realm of ecocentrism. How does a non-specific ecological design system become an initiative on the global agenda? The challenges are tough. There are huge issues of cultural diversity, religious fundamentalism, extreme diversity in topography/ climate, worldwide climate change, language barriers, conserving local genetic pools and designing for migrating genetic information, issues of globalization/ corporatization versus bioregionalization, global politics, and trade agreements. This is a frontier on the design agenda and one that will be difficult to address, but something vital to

consider when designing even our yards. As McDonough asks, how do we design to "love all the children of all species for all time?"

So what exactly happens inside the mind of the experienced designer? I don't yet know. My observation of a few of my favorite teachers and designers has suggested the following. Designers have an extraordinary ability to see solutions in place of problems. As permaculture says, the problem is the solution. Designers are well versed. They are filled with thousands of observations, examples, and information about how Nature works. Designers also see yield as unlimited. This is partially because they see it in a much larger context than biomass, but also because they recognize yield is only limited by the imagination of the designer — another permaculture principle. More specifically, they align their imagination with Nature's creativity. In my undergraduate thesis at UCSC, I tried to show that appropriate design is sparked by transcending the duality between humans and nature. In foraging societies, the duality has the human subject to nature's fertility. In the agrarian duality, humans are distinct from and in control of nature. We move beyond the duality when design recognizes and clearly articulates that humans can become an element of Nature designing herself. That is, we forgo the self to become Nature working. The creativity, fecundity, and imagination of Nature can be awakened within us. In the analogy of Tom Ward, a respected permaculture designer in Oregon, the experienced designer moves from being the counseled to the counselor. They mitigate the duality between the client and the natural forces of their property for the greatest outcome of both.

So the stages of maturity of becoming a designer move from ego > socio > eco. We start with the self, throw ourself into the culture, and get spit

The Terra Nova crew pedaling towards a sustainable future.

out as Nature intended. Designers that I know who have done well, are doing well because their designs are good and because they are motivated. They set out striving to achieve excellence and are not surprised when the bar of excellence keeps getting raised. Yet the question remains, why design? What I find most impressive about design is that the scale of vision used by good designers is so much larger than the space they are designing. Their lives create lives. I don't

have a farm yet, but I tell people I am a farmer because someday I will farm. My vision does not doubt that. People ask me what I try to grow. I tell them I want to grow lovers and grandparents, philosophers and athletes, wildlife and forests. I want to grow healthy communities and fecund watersheds, music and dance, beauty and play. But mostly, I want to grow relationships. The vision is larger than me. That's why I design. ○

Tread lightly and pedal a big rake.

The story of Terra Nova by Ken Foster

Many people have a very romantic notion of the landscaping profession. Images come up of creating gardens, planting flowers and working outdoors. Unfortunately, landscape gardening is largely practiced with all the romance of a police SWAT team. To begin with, you have a truck — if not a fleet of trucks — and the business is dependent on petroleum. You use imported and mined materials like rocks, peat moss and sawdust. Modern landscape irrigation is dependent on petroleum-based PVC pipe. Weeds are controlled with pre- and post-emergent herbicides by the ton. Pests are controlled with chemical pesticides. Sod is grown using tons of chemicals. Lawns and landscapes are installed and maintained with tractors, rototillers, thatching

machines, aerators, lawn mowers, string trimmers, edgers and two-stroke backpack blowers, all known to be significant sources of noise and air pollution in our cities. Finally, the landscape gets a heavy dose of chemical fertilizer to keep it green and healthy looking. What you wind up with is a noxious occupation for both people and the planet.

After a 10-month apprenticeship at the organic farm and garden on the University of California, Santa Cruz campus in 1985, I wanted to continue gardening in some way. I worked toward a college degree in horticulture and continued gardening part-time. Then, in 1988, a fellow farm apprentice asked me to be a partner in a landscape business. We



chose the name Terra Nova Ecological Landscaping because *terra nova* means "new earth," and we wanted to offer landscape services using the organic methods of fertilization and pest control we had learned at the farm. My business partner Luigi and I each had a pick-up truck and the tools of the trade, and work began.

There is no hard-and-fast definition of "ecological landscaping," but to us it meant using intelligent alternatives to chemical pesticides and fertilizers and taking our impact on the environment into consideration in the process of our work. From the start, we offered an array of landscape services, from consultation, design and installation to maintenance. We installed organic vegetable gardens, edible, drought-tolerant and native landscapes. We installed and maintained organic lawns. We encouraged water conservation using drip and gray water systems. Basically, we offered as complete an ecological landscaping service as we could.

Around 1991, Luigi left the business and I got my landscape contractor's license.

After looking at the whole picture, it occurred to me that although we were using organic methods in the field, we were burning up a lot of petroleum getting there. I felt that ecological landscaping should address not just how we landscaped but how we got to the landscape as well. I presented my predicament to a bicycle-advocate friend of mine. When he suggested that I use bikes with trailers instead of my truck, a seed was planted and I began to conduct a feasibility study for a Terra Nova tread-lightly service. I had a local trailer-maker make me a custom trailer for landscaping. I also repaired an old rusted trailer made from bike frames given by a friend. With these two trailers, Terra Nova's Tread Lightly landscape maintenance service was born. I then turned a local maintenance route formally done with the truck over to the bikes. With landscape maintenance, it is nice to have two people to share the chores. With the bikes, it is a necessity to be able to haul the needed equipment. What we originally carried in my truck we found we could fit into two trailers.

Being on the bikes has brought up several other issues that I consider key to an

ecological approach to landscaping; one is the need to compost on-site, not only so we do not have to haul as much, but to recycle yard debris; a second issue is the need for "grass-cycling" which we now do with mulching lawn mowers. This method returns the clippings to the lawn good for the lawn and it eliminates the need to haul clippings. A third byproduct is that the bikes encourage neighborhood business and bioregionality. We work out of five locations so we do not have to travel very far or up hills with the loaded trailers. In another effort to reduce our impact on the environment with the Tread Lightly

service, we converted from our former use of two-stroke equipment to more ecological electric powered equipment. It is hard to find good quality ecological equipment. We have had to experiment and make do with what we can find.

As of October 2001, Terra Nova's crew of eight employees and myself operate a fleet of mountain bikes with trailers, two four-wheeled, pedal-powered, mini-dwarf pick-ups, our original Jeep pick-up, and an electric truck that we use for installation jobs as well. We have managed to convert our landscape maintenance service from being 100% truck operated to 100% bike operated. We have seventy-plus landscapes that we care-take with our Tread Lightly service. I perform business errands on my bike. Landscape supply companies often deliver rock and compost for us. We offer permaculture design, and we use my trucks for jobs too big for the bikes.

Terra Nova publishes a newsletter called **New Earth News** to promote ecological urban landscaping and gardening, with news about everything from bicycle landscaping and composting to permaculture.

The bikes have returned a humanness and magic and even that romantic notion to gardening and landscaping. People stop to talk and are attracted to the praxis that is the Tread Lightly service. Today our Tread Lightly service proudly carries the banner of ecological landscaping into a sustainable future. ○

For a free sample copy of the *New Earth News* send a S.A.S.E. to *New Earth News* P.O. Box 677 Santa Cruz, CA. 95061-0677. Annual subscription rate is \$15.00 Find us on the web at <http://www.terranovaecolandscape.com/>

Ken Foster is a landscape contractor and the owner of Terra Nova Ecological Landscaping. Ken has a certificate in Ecological Horticulture from the University of California extension, Santa Cruz, an A.S. degree in horticulture and is a certified permaculture designer. Terra Nova is a full-service landscape company including consultation, permaculture design, and installation and maintenance of environmentally friendly landscapes. Ken lives in Santa Cruz, Ca. with his wife Joan and their 13-year-old daughter, Onawa.

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THE GREEN GRANGE

by Kevin Snorf

In Santa Cruz, Calif., some local neighbors saw a Grange Hall that was about to get turned into condos, because of a dwindling membership. **Using what some saw as waste and turning it into a resource (a Permaculture principle), several progressive neighbors joined the Grange and led an effort to revitalize it** by starting programs of interest to local organic farmers and consumers interested in sustainable agriculture. Membership is now one of the largest in the nation, and the addition of many young members ensures the future of our Green Grange.

There are Granges in 37 states and the District of Columbia. Granges,

throughout the nation, are involved with legislation that affect agriculture and lobby for the welfare of farmers. Granges across the nation are going under because of old ways and a refusal to adapt to changing times. There is an incredible opportunity to restore this old agrarian institution and help forward and foster the original sentiments of Grangers in the mid-1800s of safeguarding family farms and sustainable agriculture. The Grange is something we can organize around. Members can gain access to a hall, resources, and sometimes land or garden space.

The Santa Cruz Live Oak "Green" Grange has a unique focus in National Granges in that we represent the diverse view points of sustainable agriculture and sustainable culture. We started work on a demonstration organic garden using a permaculture design process which educated the community and helped plan the garden for an urban ecology. We use

it for education and research. We sponsor lectures and discussions concerning right livelihood and ecological farming methods. Members have access to a huge hall and educational garden for any social organization around the ideas of sustainable culture, community, or agriculture. We also have one of the youngest head facilitators (Master) in the nation, Kevin Snorf. There are tons of ideas and potential in this institution, but very few committed people who are working to achieve our vision. The roots of the Grange are old and probably dying. We are hoping to renew the roots of this agrarian institution by introducing the ideas of restorative and sustainable agriculture. In so doing we also hope to restore our local communities and spread the word on sustainable living so that our cities and farms might become the ecological vision we dream of. For more info. go to www.greengrango.org or call 831-425-2585.

Self-Sufficiency and Real Horse Power

by Randy Clayton

I live with my family in Santa Cruz, Calif., where we own and operate Draft Horses for Hire and Santa Cruz Carriage Company. We have done so for more than a decade.

When people see us, they might ask, "Are those Budweiser Horses?" We have three different breeds in our herd of five draft horses: English Shires, Percheron, and Belgian, all of which, despite what some people think, were not invented by beer companies. They came into prominence around the year 1000 with the movement of the stirrup from the mongols in Asia to Europe. The stirrup gave humans a stronger purchase on the horse so they could start towing heavier swords, more armor, and other burdensome implements of war. Eventually, the horse was overloaded. So, a larger, stronger horse was needed and bred, thus the draft horse.

These horses have helped us simplify our lives and reduce our dependence on crude oil. As with the Amish, a horse-centered economy keeps the family close to home. My dream is to be self-sufficient, and the horse will make that happen.

This year, we grew around 600 bales of hay with the help of our horses. That is

about 80% of the hay needed for our herd in one year's time. We share-cropped 21 acres to do this and have plans to double this amount next year. By helping to grow and harvest their own food, horses are not hooked into the drug of choice on this planet, the crude oil that comes from dead dinosaurs and is, I believe, what's killing the planet.

Draft horses survive on many of the same things we do: clean air, open space, fresh water, good grains such as oats, wheat, barley, and corn. The horses reproduce themselves (how many tractors do that?) and their manure can fertilize the production of both their and our food.

My income is a direct result of the five horses I work with and tend. Last year, we participated in nearly 80 weddings with our horse-drawn carriages, and hauled thousands of people in our wagons at Wilder Ranch State Park and other areas around Santa Cruz County.

Our horses are also good loggers. This year, we thinned dead or dying

Monterey Pines for fire prevention in the East Bay hills on watershed lands. We also pulled willows out of the San Lorenzo River in Santa Cruz for flood control and Coho Salmon habitat. And we skid out redwoods elsewhere, even though some say they are the lungs of the planet. We try to do it in the most

ecological way possible. We thin out trees that are overcrowding, take out some of the ones that are of merchantable size, skid down to a small landing and mill on site. With this type of harvest, we minimize revegetation damage and road building, which create many problems with the watershed and fish reproduction.

Another focus is in teaching the care and use of draft horses to others. Some folks have a horse and want to teach it to drive, others just want to be around a horse because horses are in our blood



Belgian Draft Horse

and have been a major part of our lives forever. We are also teaching many organic farmers and 'wannabes' to work horses.

Horses provide one way to a more sustainable lifestyle. We rarely think of how much energy it takes to pump crude oil in the Middle East, put it on a tanker, float it half-way around the world, off-load, refine and truck it to wholesalers, who then pump it in the ground for retailers who finally fill up our tractors with it. That sounds like too much energy for sustainable farming.

It's funny, people don't understand this kind of abuse to our planet, yet we get questions about abusing our horses and making them work. But these creatures love to work. Look what happens to a

human who sits on the couch all day and watches the tube. A draft horse is not

times a year. We learn a lot about health maintenance and diet so that problems don't come up. That way, we can be more self-reliant. That's the bottom line for us. The care and well-being of our horses is our number-one goal. Everything else comes after that.

If you put the horse at the center of your economy when you're designing your life, a whole new thing happens. Your health increases with your horses. You can create real self-sufficiency and sustainability. I like to say that the horse opens up opportunities for my family that wouldn't open otherwise. You meet

all these good people, and go to these great places, and get to know these incredible animals. It changes the way you look at everything. ○



Photo by Terri Dunivant. Temenos Teaching Gardens

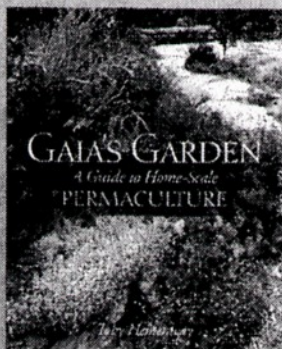
into that. We use our horses, but don't abuse them.

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Contact List for Permaculture Related People or Organizations in Santa Cruz

Permaculture Santa Cruz, 831-469-9109

Santa Cruz Live Oak Green Grange 831-476-6424
or Kevin Snorf (see below); www.greengranger.org

Terra Nova Ecological Landscaping and Ken Foster
831-425-3514; www.terranovalandscape.com

Draft Horses For Hire 831-466-9160
and Randy Clayton (www.drafthorsesforhire.com)

Bruce Beernink - designer/ farmer 831-454-0473

Kevin Snorf - aspiring designer/ farmer,
ecopsychologist, local contact 831-425-2585
(snorf@cruzio.com)

Toby Hemenway, the permaculture author (*Gaia's Garden*) is coming to Santa Cruz on Nov 1 to speak at Loudon Nelson Community Center. Contact Kevin for more details.

Distributors of HopeDance in Santa Cruz County:

Kevin Snorf: 831-425-2585; snorf@cruzio.com

Gary Harrold: 831-662-0102; gsh@surfbest.net

San Luis Obispo HopeDance

Garden Farms couple explore challenges of permaculture

by Stacey Warde

With a welcoming hug, Karen Kimmell ushers her guest into the kitchen of her home in the Garden Farms area of Santa Margarita, where she and her husband Rob have tried their hands at permaculture for more than five years.

Their home at this early hour exudes odors of tea and sage, evidence of their passion for nature and the sacredness of life. Cats stroll through the kitchen as Karen offers us the morning libation of tea or coffee.

Rob, a counselor at the California Mens Colony, has taken the morning off to tell the story of how he and Karen have experimented with the less than one acre of land he has owned for 18 years.

Although Rob had some knowledge of how to turn his land into an integrated, productive site, he was lacking the insights and inspiration that he later gained from Bill Mollison, the curmudgeonly Australian who developed the concepts behind permaculture.

While listening to Mollison on the radio program *New Dimensions* several years ago, Rob's ears perked up as Mollison spoke of the serious problems of the environment, the depletion and mining of soil, the tainting of air and water.

But what really caught Rob's attention was the second half of the program in which Mollison discussed viable solutions through the practice of permaculture principles, the most basic of which are: Care for the earth, care for people, and everything gets recycled.

Permaculture has been variously described as "the art and science of living with nature," a "design system based on ecological principles," and "a holistic approach to landscape design and human culture."

By whatever definition, more individuals on the Central Coast, such as

Rob and Karen, are exploring the potential benefits of making their homes and lifestyles more earth-friendly through permaculture.

Until that fateful day in 1997, when Mollison caught his attention, says Rob, "I'd say I was a 'closet' environmentalist. It helped me come out of the closet."

As most people who receive such inspiration, Rob began ordering books and videos, soaking up as much information as he could find. That spring, he and Karen hooked up with permaculture innovator Penny Livingston in Pt. Reyes, Calif.

They returned even more determined to make a difference with their property, and decided to attend a summer workshop with Mollison in Half Moon Bay.

There they learned one of the most vital lessons of permaculture: "The breaking point of community, where individuals in conflict risk alienation and disillusion, is also the point of breakthrough, where a community builds resilience and vigor."

Mollison left in disgust after a few days over differences he had with the host of the workshop. A large contingent left with him. But nearly 100 others, including Rob

and Karen, remained in Half Moon Bay to continue their training.

"We discovered the 'chaos phase' of community," says Rob, "the time when a community either breaks up or hangs in there and gets down to work."

Permaculture, he learned then, "is a path for reconnecting people."

This is exactly what he and Karen seek through their stewarding of the land they inhabit. Their home is surrounded by

lush foliage, which produces a variety of herbs, fruits and vegetables, which they are eager to share with their neighbors and friends.

They maintain an open-door policy in which their friends are welcome to visit, tour the backyard garden, sip tea and converse.

The yard, which features more than 30 fruit trees, a flourishing vegetable garden, 30 chickens, 14 geese, a geodesic dome, greenhouse, piles of compost and layers of sheet mulch everywhere, vibrantly displays the care they've put into it. It's a clear example of the first principle of permaculture: Care for the earth.

In five years they've transformed what used to be mostly lawn into a fertile and productive site, lessening their reliance on outside resources for their produce. Eventually, they will reduce their dependencies even more, conserving and reusing their water, composting all of their waste and producing their own energy.

At this point, says Rob, it's hard to say whether they're actually practicing permaculture.

"We still don't know what qualifies this as a permaculture site," he adds. "What are the criteria?"

Karen offers an answer: "Systems that are working together."

"Where we are taking advantage of every characteristic of our site," Rob adds.

There's definitely more that can be done, they say, pointing out the possibilities: a grey water system that utilizes water from shower, laundry and kitchen, a compost toilet, outdoor structures for gatherings and overnight visitors, and ponds for filtration and other habitat.

One of the difficulties of getting their system off the ground — a problem faced by many Americans pressed for time and energy — is balancing their passions with



Rob and Karen Kimmell. Photo by Stacey Warde

the practical reality of making a living.

They consider right livelihood to be a sacred path: work that supports them and allows them to thrive and be of service to others. Permaculture offers a direct entrance into this style of living.

While enthusiastically touring her garden, Karen asks: "Do you know what really lights me up?" It's obvious: The potentials of living sustainably.

Eventually, she and Rob plan to make this a full-time endeavor. Rob hopes to retire in a year to give this his full attention. Until then, and even after, they say, help from the surrounding community, those with an interest in sustainable living, will be needed to keep things going.

Rob formed the Central Coast Permaculture Guild several years ago as a way to bring people together to support

each other in developing their sites.

He calls their efforts "work netting," a type of barnraising in which people come together to build and create sustainable communities.

The guild has been dormant, he says, but will be getting a jump-start in the days ahead.

For information about the guild, contact Rob or Karen at 438-KRIK.

Student Experimental Farm promotes sustainability at Cal Poly

A tractor from an adjacent field kicks up a shroud of dust which sweeps over the Student Experimental Farm at Cal Poly. Horses and cattle graze on distant hillsides. Swine snort from nearby pens. Piles of manure and compost across the dirt road radiate in the fall sun.

This is "ag" country, where students from the school of agriculture learn the techniques of large-scale farming with their requisite hazards of fertilizers, pesticides and soil depletion.

In the midst of it all stands the two-acre parcel run by the Sustainable Agriculture Resource Center, which offers more earth-friendly methods of farming.

"The Student Experimental Farm is a great place for people to learn alternatives to modern agricultural practices," says Hunter Francis, program coordinator for SARC, an informal program within the College of Agriculture.

Established last year to provide better management of the 12-year-old experimental farm, SARC also develops curricula and educational programs for the whole community — from school children to senior citizens.

"Our niche is highly diversified organic food production systems," Francis says, "but our wider mission is to promote any system which helps farmers and gardeners achieve a greater degree of sustainability."

The herb and vegetable beds maintained here have that vibrant,

unkempt look of so many organic farms. Tomatoes, peppers, eggplant, squash, a variety of herbs, fruit trees, abundant insect life and even weeds color the landscape.

The vibrancy of color and life at the student farm is a stark contrast to the sterile row crop sites of monocultural farming, where the biodiversity of life forms has been compromised, if not entirely eliminated.

A thick adobe-like wall, built of straw bales, separates the farm from the neighboring plowing field, which is used by agriculture

students for practicing their tractor skills.

The two plots of land reflect the odd dichotomies between two very different approaches to food production. Permaculture, with its emphasis on biodiversity and sustainability, seems to point the way to a healthier future. The dust created by the tractor next door creates an atmosphere that seems less promising.

Nonetheless, Francis argues that while some aspects of modern agriculture may appear at odds with the more environmentally benign practices taught at the student farm, both share a common heritage (in the history of agriculture). He also believes people of differing farming philosophies have much to learn from each other.

"Certainly, modern organic agriculture has benefited from the development of modern agricultural science in its exploration of life's many processes. And now, 'conventional' farmers are starting to realize that they can benefit from the trials and research done by organic farmers as they seek to limit their reliance on hazardous — and costly — inputs."

Francis wants to build bridges between these differing perspectives. "After all, we're in this together. We need to find more effective ways of cooperating."

Over the years, the student farm has hosted many programs, workshops, and seminars on farming and lifestyles that enhance rather than deplete natural systems.

The farm has been home to three Permaculture Design Series intended to give more specific instruction on sustainable living. The interdisciplinary nature of Permaculture, with its focus on food production, architecture, community, and even money management, ties in well with the overall objectives of the student farm, says Francis.

Permaculture, he adds, is "a design process. ... A lot of people", he continues, "think only of gardening when discussing Permaculture." Gardening is just one small part of it.

Permaculture promotes the ongoing development of systems, including the interactions between soil, water, plant and animal life. It takes patient observation and learning. The



Hunter Francis checking his peppers. Photo by Stacey Warde.

design unfolds as you go.

"If people can begin to make the connections and see how all of these different areas of activity relate, we will be better able to develop communities that are truly sustainable," Francis says.

Other projects at the farm have included "everything from alternative energy systems (such as biogas production), to studies in hydrology, to strawbale architecture, windbreak tree planting, vermicomposting, aquaculture and even artistic performances."

Future projects include the construction of a meditation-sitting garden, ponds with flow forms, a greenhouse, solar power demonstration, and completion of a new packing shed initiated by a group of Cal Poly ag students last winter.

One important feature of the farm, Francis points out, is its connection with the surrounding community.

Bringing consumers back to the local farms so they can actually see where their food is produced, for example, is one

important step in reconnecting people to the earth, Francis notes. In some cases, it may even encourage more people to grow their own food.

Or, by simply visiting the student farm, those of us who grew up with a supermarket food consciousness, can begin to understand how natural systems, so vital to our survival and well-being, work. In doing so, we can begin to take more responsibility for the quality of our food and of the lives we lead. This is one of the basic goals of Permaculture, says Francis.

One way these connections are being made, he adds, is through programs such as community supported agriculture (CSA) in which consumers develop a direct relationship with farmers. CSA members pay a fee for regular allotments of produce harvested at the farm over a period of time.

Last year, Student Farm manager (and SARC co-founder) Terry Hooker initiated a CSA program at Cal Poly. The

CSA program was offered again this summer over an 18-week period.

Forty memberships were purchased by local customers. The CSA was managed by Cal Poly students under Hooker's direction.

"Participants in our programs have often expressed their satisfaction in being able to see where (and how) their food is grown", Francis says.

Currently, the farm is offering a similar weekly organic produce program (through mid-December) as part of a fundraising campaign. Each Thursday, from 3:30 p.m. to 6 p.m., customers pick up a box filled with a fixed menu of fresh produce supplied by TKP Farms Inc. in Santa Maria. Subscriptions to this program are still available.

For more information about this and future activities at the Student Farm, please contact the SARC at Cal Poly at 756-5086 or sarc@calpoly.edu.

Stacey Warde

Toltec and Permaculture in Los Osos?

by Kathryn Santoyo

The Temenos Teaching Gardens, a permaculture site and learning center in Los Osos, Calif., is ideal for heirloom vegetables and other rare food crops. Flowers and herbs share the coastal chaparral landscape with llamas, chickens, abundant wildlife — and humans.

Temenos (from the Greek, meaning "sacred space"), springs from the vision of owner Victoria Fullerton. When she discovered this 10-acre property five years ago, with its centuries-old oaks and sycamores, creek and year-round spring, Fullerton knew that it was the perfect place.

She created a center built by artists and craftspeople, where others can come to learn and work in a garden setting.

For nearly three years, she has collaborated with permaculture designer Larry Santoyo to create a learning center.

Gardens and orchards have been planted, rock walls and paths, and new buildings have been added. Still, Temenos continues to evolve. New species and functions arise each year, building on the

work of previous years.

Fullerton apprenticed with spiritual teacher Don Miguel Ruiz, author of the "Four Agreements" of the Toltec Wisdom Path. She offers this teaching, which holds that "everything is a manifestation of the one living being," and that we, too, are in "everything — every human, in every animal, in every tree, in the water, in the rain, in the clouds, in the earth."

Santoyo believes that permaculture is the natural complement to that vision. "Learning how to design our lives by following natural principles is the best way that I know of where we can heal ourselves as we heal the earth," he says.

At Temenos, evidence of those natural principles is everywhere: Sustainable and recycled materials in the center's buildings, and salvaged redwood and cedar were remilled and used in the construction of a meditation platform, art studio and a multi-functional conference room. Even the greenhouse is artfully detailed, and the potting benches are made of timber bamboo topped with recycled plastic lumber.

An amphitheater made of straw bales doubles as "storage" for mulch. Vegetable gardens spiral down a hillside, mimicking natural flow patterns. Stormwater runoff is "harvested" for use in the gardens and vineyard. The young orchard is underplanted with vegetables and herbs,

flowers and fruiting shrubs, known in permaculture design as a "food forest."

To grow such abundance in what previously was only sand, Santoyo brought in hundreds of yards of locally made organic compost. "We are accelerating evolution," Santoyo says. "By adding the energy now, the site can become more sustainable in this generation and the next, and will, in fact, soon require little or no outside inputs."

Meanwhile, Temenos' outputs continue to change as well. Along with its produce, which is available to the specialty markets, it will soon be offering open-pollinated seeds, rare food nursery stock and naturally dyed llama wool, all of which offer learning opportunities for students and volunteers. Yet, just being at Temenos, surrounded by thousands of acres of open space and abundant with quail, bobcat and deer, is surely a learning experience in itself.

Fullerton offers her series of Toltec classes throughout the year and, beginning in January 2002, Santoyo will offer introductory and continuing education classes in Permaculture Design at the center as well. For information on the Toltec classes, contact Victoria Fullerton at 805.528.6995. For information on Permaculture Design classes or to volunteer in the gardens, contact Larry Santoyo at santoyo@earthflow.com or 800.469.5857. ○

Permaculture Principles as illustrated by the Permaculture Tree

by David Holmgren

"P^{er}maculture Principles In *Permaculture One* (1978), Bill Mollison and I outlined the theory and some initial applications of permaculture design without explicitly listing a clear set of permaculture principles. The permaculture tree presents the concept as analogous to the germinating tree seed giving rise to interdependent root and aerial structures. The germination of the idea generates both the physical reality of holistic sustainable human support systems and the holistic conceptual framework of knowledge. In *Permaculture: A Designers Manual* (1985), Bill Mollison provided an encyclopaedic coverage of the scope and possibilities of permaculture design as well as an enlargement of the theory and design principles which underlie the applications.

In the *Introduction To Permaculture* (1991), Bill Mollison and Reny Slay present design principles in a much simpler format, attributed to American permaculture teacher John Quinney, which has since been widely used or adapted by many permaculture teachers.

The idea behind permaculture principles is that generalised principles can be derived from the study of both the natural world and pre-industrial sustainable societies and that these will be universally applicable to "fast track" the post industrial develop-

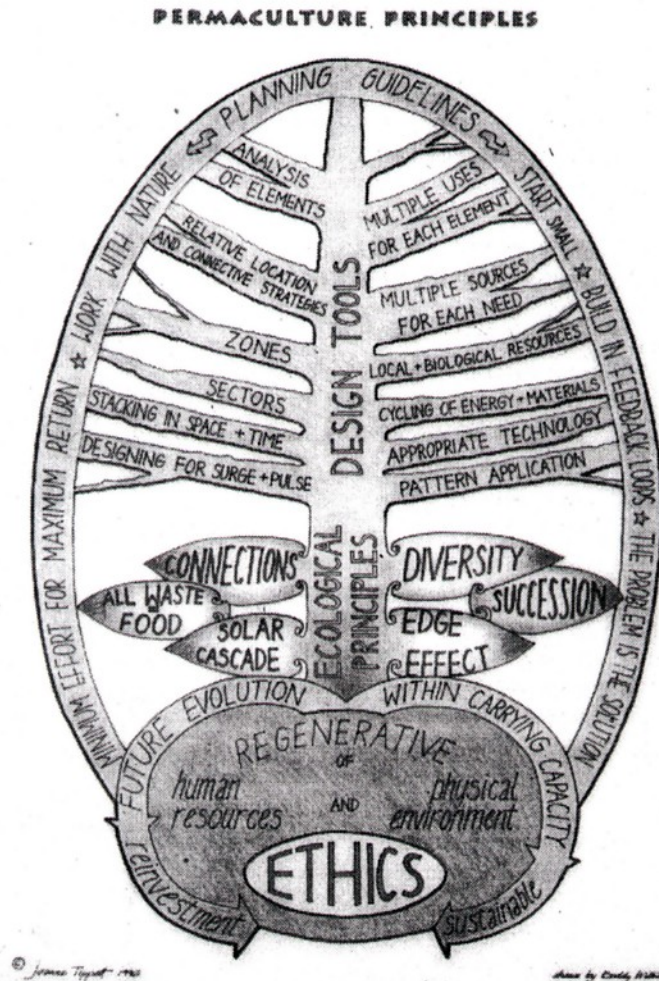
ment of sustainable land and resource use.

The process of providing for people's needs in more sustainable ways, requires a cultural revolution. Inevitably such a revolution is fraught with many confusions, false leads, risks and inefficiencies. We appear to have little time to achieve this revolution. In this historical context, the idea of a simple set of guiding principles which have wide, even universal application is attractive.

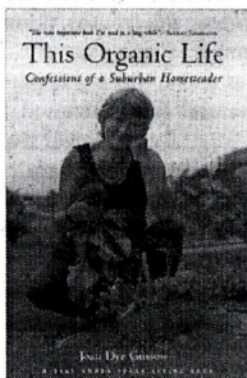
Permaculture principles are brief statements or slogans which can be remembered as a checklist when considering the inevitably complex options for design and evolution of sustainable systems. These principles are seen as universal although the methods which express them will vary greatly from one place and situation to another. By still developing extension, these principles are also applicable to our personal,

economic, social and political reorganisation as illustrated in the Permaculture Flower." (see the Permaculture Flower on page 32)

— Reprinted from his new book, *Permaculture: Principles and Pathways To Sustainability* by David Holmgren © October 2001. For more excerpts from his book, go to www.spacountry.net.au/holmgren/PCprins.html



BOOKS & Videos



This Organic Life: Confessions of a Suburban Homesteader

by Joan Dye Gussow, Chelsea Green Publishing Company, 2001

Joan Dye Gussow's book, which starts out as a simple gardening memoir, develops into a powerful case for eating locally grown foods. Gussow's passion for growing food is graphically displayed in the comedy of errors that occurred when she and her husband bought the plot of their dream garden adjacent to the Hudson River. The house was only a second thought, barely glanced at while they happily gardened away on the land even before the transfer of title. I wondered why Gussow spelled out the gruesome details of dealing with the doomed house, but through the rest of the book I saw that she had set the stage for her gardening wisdom and woes. And wise she is, with 40 years of experience, both professionally and personally, with the issue of food. Her concerns span a wide breadth and include global warming, food transportation, the demise of the family farm, the implications of killing animals (she does eat meat and protects her garden from animals), and the lack of awareness of where our food comes from as consumers expect the super-grocery store to supply every whim. These issues are not dryly presented; rather, they are woven into the garden narrative with Joan's distinct voice and sense of humor.

This Organic Life expanded my view of

what it means to eat locally. Buying from the farmer's market is a start, but the issue goes much deeper. How can we have a sustainable world when huge amounts of energy are spent on transporting food across continents and oceans, often in refrigerated compartments? Meanwhile, local farmers die on the vine because they can't compete with the subsidized or cheap costs of the transported food. Gussow decided to take local eating a step further and made the commitment to try growing all her own vegetables year-round in a suburb outside New York City. Her discipline and commitment make her an impressive role model, and I find myself making different choices with my food dollar.

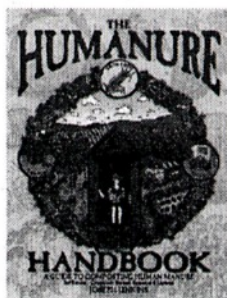
You may be marveling at her self-sacrifice, but Joan Gussow makes it clear that growing and eating your own food is a privilege. She says, "The production and consumption of fresh local food is so rich an experience for me that I find it hard to imagine how I would live if I couldn't grow what I eat and eat what I grow." "Although I myself never knowingly eat fruits and vegetable shipped by air freight, I know how bland they are, because when people eat what we grow, they are always knocked over by the intensity of the taste." Of course, eating locally means eating in season. "Although many people claim to be unhappy with the way farming has been industrialized, they don't make a connection between their demand for stone fruit in mid-winter and the global food chain that brings them cheap food from wherever in the world farmers can be paid the least to grow it." But seasonal eating can be transformed into an asset. "Meal planning is simply more exciting and less bewildering when you wait for local vegetables to come into season, eat them steadily when they arrive, and say a reluctant goodbye for another year when their season has passed." Joan includes her favorite recipes to prove her point. I enjoyed the simplicity of the parsnip pancakes, and there are many recipes with a Mexican flair.

The book ends with a chapter called, "California and the Rest of Us." Gussow

explores the history of subsidized irrigation in California and its affect on farmers throughout the United States. And as California looses farmlands to suburbs that also demand water, she wonders whether California will continue to be able to feed the nation. The synthesis of nationwide and global issues with the local and personal is the strength of this book.

Gussow does see hope in a growing food movement as eaters of the world support local farmers through activities such as joining a CSA (community supported agriculture). Education is crucial, and this highly readable book helps us understand the true costs of food, and the joys and challenges of growing and eating it.

Selene Anema battles slugs and green cabbage worms in her quest for the perfect broccoli.



The Humanure Handbook: A Guide To Composting Human Manure

by Joseph Jenkins (2nd Edition)

Everyone and anyone dealing with or interested in septic systems, sewage treatment plants and water quality should spend a few hours and seriously consider what this book has to say. Many are working on alternatives, and this is one more that needs to be considered. The author starts by asking, "Why do we crap in our clean drinking water?" Good question. The *Humanure Handbook* is a treatise on the various methods and processes of composting and how it can apply to our own dilemma of sewage and waste water woes. Informative, with enough technical information and literature review, it is also humorous. The introduction to Chapter 5, "A Day in the Life of a Turd," sums up our predicament.

Jenkins writes, "When I was a kid, I listened to Korean War veterans talking about their stints. The conversation would often turn to the 'outhouses' in Korea and the vets were amazed, even mystified about the fact that the Koreans tried to lure passersby to use their outhouses by making the toilets attractive. The idea of someone wanting someone else's crap always brought out a loud guffaw from the vets. Only a groveling, impoverished, backward gink would stoop so low as to beg for a turd. Perhaps this sums up the attitudes of Americans. Humanure is a waste product, plain and simple. We have to get rid of it and that's all there is to it! One of the effects of this attitude is that Americans don't know and probably don't care where their humanure goes after it emerges from their backsides, as long as they don't have to deal with it." Jenkins has coined this psychological phenomenon Fecophobia.

The author cites evidence and research that the 22 million septic systems in the U.S. are leaching bacteria, viruses, nitrates, phosphates, chlorides, and organic compounds such as trichloroethylene into the environment to the tune of 820-1,460 billion gallons annually into our shallow aquifers. This doesn't sound good to me, as I get my water from a private well.

Jenkins and his family have taken a different approach for the past 20 some years, "Rather than a waste disposal system, which is what a septic system is, I'd much rather engage in resource recovery."

The Humanure Handbook does a good job of outlining the problems of sewage and septic effluent, but does an even better job of showing how the sane and environmentally beneficial solution of composting humanure can be easily incorporated into homes and cities. Jenkins outlines thoughtful and smell-free composting toilet methods that most anyone can construct and use. Also listed are the many commercial models available.

Check out this book and educate yourself! Even if you only read the cartoons it will be worth it. [Brent Ladd, MS, Permaculture Design Certificate]



Create an Oasis with Greywater, Builder's Greywater Guide, Branched Drain Greywater Systems

all by Art Ludwig
(Oasis Design; 2000; \$14.95;
www.oasisdesign.net)

These three books advocate what I consider "guerilla engineering," more art than science, more experiments than experience. Author Art Ludwig intimates this right up front with a disclaimer that may appear to be a mere legality (wink, wink): "The design and use of greywater systems carry legal, public health, horticultural and ecological consequences. ... Do not use greywater unless you are well aware of the possibilities for transmitting disease or contamination. ... Information in this book is provided solely for the purpose of stimulating dialogue, [and] is not intended to promote any violation of the law"

My engineering background compels me to take these cautions seriously. Although wastewater is not my specialty, my idea of what I don't know paired with my Third-World waste exposure leads me to believe that bio-stuff *can* hurt if not dealt with properly. Perhaps my trepidation is the same sort of overkill Ludwig finds in legal greywater systems that are over-engineered with unreasonably high safety factors. He contrasts these "legal" (high-priced) systems with "practical" (more economical) methods that do-it-yourselfers install without regard for code requirements. It is primarily this latter category of greywater systems for which Ludwig provides descriptions and specifications, for purposes of stimulating discussion, of course.

Cautions aside, these books are excellent educational tools written by an apparently adept inventor. They can be

used stand-alone by gifted and gutsy Do-It-Yourselfers, or in conjunction with other greywater guidebooks and/or professionals for the less mechanically inclined.

The first book, *Create an Oasis*, defines greywater and its uses, primarily irrigation, tempered with a list of circumstances under which greywater should not be used (unsuitable soil, health concerns, ecological cost higher than benefit, etc.) Health concerns are expanded upon, but discounted in perspective with all the other ecological/health risks of modern living. Once you get past these, it is assumed you want to "go for it" and are guided through the design/build process. The first step is knowing your volumes of input (greywater) and output (irrigation); a number of charts and examples provide help with this. But there are a host of other variables that cannot be so neatly quantified when deciding what sort of system to install (regulations, economics, site factors, convenience, tinker-ability, etc.) and these make system selection more subjective than objective. Systems to select from are many and varied, ranging from a collect-and-dump bucket on the low-tech/low-cost end to automated drip systems on the high-tech/high-cost end. Numerous detailed drawings are provided to illustrate concepts and designs, and a highly informative appendix on common errors alert the reader on what to avoid. To boost limited know-how, a section is provided on plumbing principles — but its relative brevity could make you dangerous.

The second book, *Builder's Greywater Guide*, provides information supplemental to *Oasis*. Features include a detergent chart to assess least impact upon a greywater system (low boron, alkalinity, conductivity, sodium and phosphate) and an annotated version of California's greywater law (in the Plumbing Code). This book straddles the line between "legal" and "practical," allegedly mutually exclusive concepts when it comes to greywater systems. It is not clear, however, where Ludwig draws this line (obtaining vs. forgoing the requisite building permit for the system?)

The third book, *Branched Drain Greywater Systems*, contains expanded descriptions and specifications for that system, one of the 20 systems contained in *Oasis*. It contains instructions on how

to get a permit and guidance for mulch basin design, an integral part of systems described in all three books. Trouble-shooting advice and real-life examples balance the technicalities found throughout the rest of the book.

With two or three of these books, a mechanical aptitude, and an abiding passion for doing the right thing (ecologically, not legally) you should be able to install a greywater system of your own. For the mechanically challenged like me, it seems a better bet to hire Ludwig for evaluation, design and installation. If he'd take the job, that is. From the looks of his website (www.oasisdesign.net) he's a pretty busy guy these days. No wonder, with the amount of creativity and expertise he exhibits in his books!

Barbara Lind



A CHILD'S FOOD FOREST: An Outdoor Classroom

by Carolyn Nuttall
(FeFL, Woolloongabba, Australia; 72pps; 1996)

"This is a story of a small vegetable garden that grew into a magnificent food forest in the grounds of a city primary school" Carolyn Nuttall begins her tale of a school project in Australia. The book is divided into two parts. In the first, we are introduced to the original Food Forest and the children who created it; the second part, called a Teacher's Manual, is chock full of ideas, explanations, charts, graphs, and forms, for those who wish to use the experience

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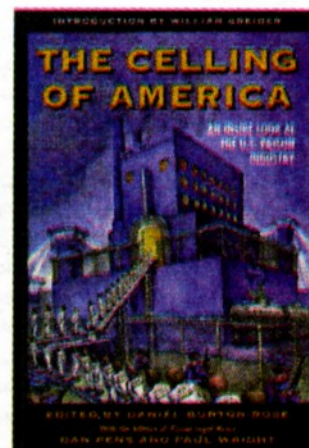
of the Seville Road State School project to create their own Permaculture-based gardening project with children. The book is a delight to read and easy to follow; one may either read it straight through or browse the numerous little tips, ideas and graphics in a random manner. One gleans plenty of information and inspiration either way.

The Food Forest started out as a school-year theme to integrate subjects and stimulate interest in learning. Ms Nuttall documents how this project was able to do just that, in such varied subjects as English, math, science, citizenship, environment, and physical education. She includes clear, precise ideas about curriculum planning, and personal reflections about how tending a garden can contribute to tending one's mind, something many of us gardeners may know intuitively but can not put into words. In comparing this to the language-in-use model of teaching English, she reminds us, "Permaculture...immerses its learner in purpose and worth. A permaculture imperative reminds us that we are all learners and that personal meaning-making and development is the process of everyday experiences."

My favorite parts of the book are the instructions for making a Mandala Garden, an Herbal Spiral, and a small pond (all basic Permaculture components), the page on Children as Producers (of food), and, of course, the section on Child's Play. I also learned how to make a no-dig garden. How is it that I had never heard of it quite like that before? There is just enough information on basic Permaculture design, choosing plants, and landscaping/learnscaping. This makes a great reference book that can be used over and over again.

I would have liked to hear about how the author resolved conflicts, such as students who were not interested, but in her story, it sounds as if every single student was engaged (how rare is that?). I also would have liked to know what the children did with the vegetables from the garden. Did they prepare any meals together, share recipes, or each take some of the harvest home, sell produce at a county fair, or a combination of the above? "A Children's Food Forest" is a great resource for introducing Permaculture to children. And if we can get the children engaged and committed to these Principles, we have the future all sewn up.

Barbara Wishgrad



THE CELLING OF AMERICA

by Burton Rose-Pens and Wright
(Common Courage Press; 1998, \$19.95)

Print media and television coverage tells the public the realities of prison life through the eyes of a reporter. Reports are often edited and compromised to suit the standards of network television executives. Thus, the public never hears or knows what really goes on behind bars.

Finally, book which tells the dark secrets of what drives the multibillion dollar prison industry and the exploitation of human beings for profit.

The book, *The Celling of America*, is a powerful collection of essays, written by convicts themselves, which are grounded in reality, uncensored, and unedited.

Each essay is thought provoking, informed and allows us to re-think the public notion of "lock 'em up and throw away the key".

The book takes us through the infamous "gladiator fights" staged by prison guards at Corcoran State Prison in California. Another essay explains how schools, universities and libraries are forced to purchase furniture, desks, and other items from the PIA (Prison Industry Authority) at inflated costs, sometimes even more than retail price, by law.

Then, we taken into the SHU (Security Housing Unit) where convicts are isolated from the general population in tiny windowless cells for over 23 hours a day. We see what living conditions are like in the Pelican Bay and Corcoran SHU in California, and the infamous Marion Lockdown Facility in Illinois, home to John Gotti. Convicts explain how they survive, how they share solidarity, and how they maintain their sanity, in such an isolated existence.

Some of the essays elaborate on popular topics such as Three Strikes, the CCPOA (California Correctional Peace Officers' Association), the removal of weightlifting and the ban of media interviews with convicts, etc.

The most touching is the essay on prisoner rebellions and struggles, explaining how many convicts have lost their lives in the struggle for prisoners' rights. Also, a real look into prisoner abuse by guards, medical staff abuse, and even judges, who often dismiss lawsuits filed by prisoners as frivolous, without even looking at the merits.

THE CELLING OF AMERICA will make you realize that the prison industrial complex feasts on a steady diet of racism and poverty-hatred and fear. It will leave you with a final question.

Due to the large number of African American and Latino prisoners serving time nationwide, is the prison industry nothing more than modernized slavery?

Tito David Valdez Jr. writes from his cell at CMC East, exercising his First Amendment Right. He can be reached at: davidv@inmate.com



It's A Meaningful Life: It Just Takes Practice

by Bo Lozoff
(Penguin Compass 2000 \$13.00 paper 288 pp.)

Spiritual self-help books are a dime a dozen. Today's hot trend is tomorrow's garage sale leftover. Some contain real wisdom, others are small amounts of platitudes set in big type. It is rare to find one of enduring value.

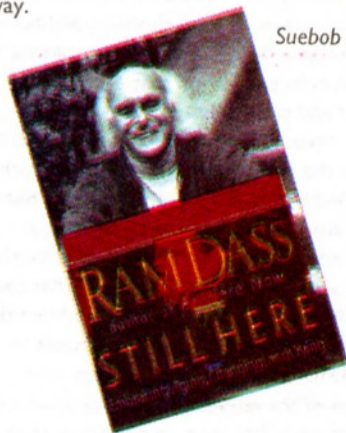
Bo Lozoff is a veteran spiritual leader, co-founder with Ram Dass of the Prison Ashram Project, and founder of the Human Kindness Foundation (www.humankindness.org). In this book, he uses a workshop-type format to

condense some of the world's best advice on moving our lives "from the fast lane to the vast lane" in a series of chapters that begin with a question and end with a spiritual practice.

Half of the book is devoted to Communion (inner work) and half to Community (outer work). This balance between different aspects of life gives an appeal that is not found in many self-help books, which usually emphasize the personal and ignore the larger social aspects of spiritual growth. The book describes the central problem of our lives: "Human life is very deep, and our dominant modern lifestyle is not."

The spiritual lifestyle described by Lozoff is not easy, requiring discipline, focus, and patience — things modern Americans may not be good at, but we sorely need. And, as Lozoff says, "You can do hard," his way of saying that the difficult is worth doing. The practices he advocates, such as prayer, meditation, fasting, making vows, and living simply are not new, having been used successfully throughout the ages in many traditions. He says there is no need for us to have to discover everything for ourselves again when wise souls from the past have laid the groundwork for us; it is like a trail of bread crumbs left for us by previous explorers on the path.

The time might just be perfect for a book like this, since tragedy has brought the need for a spiritual life into sharper focus. The book reads simply, clearly, and is full of ideas that could help you to live your life in a deeper, more meaningful way.



Suebob Davis

Still Here: Embracing Aging, Changing, and Dying

by Ram Dass
(Penguin Putnam Paper \$13.13; 209 pp.)

Ram Dass was a spiritual guide to baby

boomers in the late '60s with his popular book *Be Here Now*. Thirty years later, even after a serious stroke, he is still a calm and happy voice in an angst-filled world, leading boomers through the process of aging from his wheelchair.

Considering our culture's view of aging and dying, a book about those subjects sounds like a bit of a downer. This is anything but that. It is more like wise and funny advice from a trusted elder.

In *Still Here*, Ram Dass encourages us to look beyond the shabby wrecks of our physical bodies to overcome the suffering that is caused by identification with them. He uses the path of aging both metaphorically and literally as a spiritual path, showing us that there may be a better way to look at aging than the one the dominant paradigm shows us.

He encourages readers to practice mindfulness about aging. He says "Instead of honor and tender care, many of our aging population experience boredom, despair and emptiness, with no outlet for our suffering. It is important that we not wait until we find ourselves at such an impasse before seeking an alternative means of confronting our aging years." He uses storytelling, parables, poems, quotations and personal tales to share his considerable knowledge with us, and on every page his kindness and sweet presence shine through.

I read this book the week of my 40th birthday, when I was in a lot of back pain and was spending a lot of time moaning about getting older. It helped me re-frame my journey in a positive light. I would suggest it for anyone who is getting older!

Suebob Davis

Hepburn Permaculture Gardens: 10 Years of Sustainable Living (1985-1995)

By David Holmgren
(Holmgren Design Services; 61 pp.)

For anyone unfamiliar with permaculture, David Holmgren's handsomely designed "poster-style" book detailing his 10 years of sustainable living will at first appear an intimidating resource. Not the most easily accessible book with its dry, sometimes technical, narrative, it nonetheless offers a rich source of material from one of the early pioneers of permaculture.

Holmgren helped permaculture's leading figure, Bill Mollison, develop and popularize the principles of this form of sustainable living. He has remained outside of the limelight, however, attempting instead to put into practice the ideas he created with Mollison.

Holmgren's latest book uses a case study approach, focusing on his own experiences developing a site for "cool climate permaculture" in Hepburn, Victoria. He emphasizes from the start that every site has its unique characteristics, which thus make it difficult to superimpose universal principles.

He warns of "the danger in attempting to transplant our design or parts of it to another site. Every place, context and person is unique, as should be every permaculture design."

Then Holmgren offers a fine array of photos, sketches and topographical maps, along with explanatory text, including definitions of unfamiliar terms, to describe his 10 years of planning, building and developing Hepburn Permaculture Gardens with his wife, Su, and their two children, Kimon and Oliver.

The book serves as a stimulating model of the possibilities and challenges of permaculture. From the start, the reader can see clearly the amount of detail and attention required for this kind of lifestyle. Holmgren discusses land selection criteria, the difficulties in finding what his family wanted, and the adjustments and compromises they had to make to develop the site.

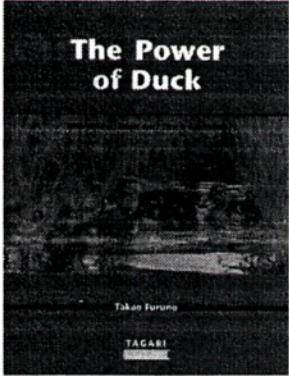
The biggest compromise, for example, was "the predominantly west facing rather than north facing slopes" of the property. The north slope in this part of Australia would have provided easy solar orientation for the house and maximum heat gain for plantings.

"The ways in which we have dealt with this less than ideal situation for permaculture in a cool climate is one of the important lessons in this case study," he writes.

The goal in pursuing this course, he says, is to build a more self-reliant lifestyle, one that will place less pressure on limited resources, where his family, as with other permaculture practitioners, can take "more, not less, responsibility for their own needs."

Stacey Warde

[See David Holmgren's excerpt from his latest book on page 66, in this issue.]



The Power of Duck Integrated Rice and Duck Farming

by Takao Furuno
Foreword by Bill Mollison
(Tagari Publications; 2001; \$19.95)

"We need to reassess our relationship with ducks," says author Takao Furuno. His point is well taken by this reviewer, and apparently also by Permaculture cofounder, Bill Mollison, who gives Furuno's farming system high marks. Their synchronistic meeting in 1994 in Hanoi, Vietnam, at an international conference on domestic food security, eventually led to their collaboration at Furuno's farm in Japan, and ultimately, the publishing of this inspirational permaculture model. Mollison writes the foreword of this book, concluding that the book is a "thoroughly-described and very well-tried system of sustainable, productive, clean polyculture in paddy fields," and serves as a "text book for case studies and farmer-evolved natural systems."

Furuno's system uses the Aigamo duck, which is a cross-breed of a wild and domestic duck. Already an organic farmer for 10 years, the idea of using duck power came to him 14 years ago, when he got tired of weeding his rice paddy under the hot sun. He notes that ducks will hardly eat any rice leaves, even though they will eat many weeds. He reduced the weeds in his rice paddy so well with the introduction of ducks that he had to introduce a "weed" as a "fodder crop" for the ducks! Furuno increased the biodiversity within the rice paddy over the years, establishing a permanent cycle for rice growing, stockbreeding and aquaculture. By creating a new ecosystem of ducks, azolla, rice plants, fish, weeds, and insects in the paddy field, he has

increased productivity AND put a diverse meal on the table for humans in the form of rice, fish, and meat (ducks).

Don't get caught up on the specifics of your site by thinking that you'll never have enough water to have a rice paddy, therefore Power of Duck has no value to you. It's likely that Furuno's insights could cause you to see the relationships of plants of animals in your landscape in a whole new way. It's a paradigm shift for which I believe we're all primed and ready. I, for one, am ready to reassess MY relationship with ducks!

Rob Kimmell

Corrections

A documentary by Ashley Hunt, produced by Jonas Hudson, 52 min.

Corrections is a recently released film dealing with private prisons in the U.S. The film looks at the emergence of prison privatization as well as the expansion of all types of prisons in recent years. The filmmakers visited a number of communities where for profit prisons have been built. They found that many of them were in economically depressed areas in need of jobs and tax revenue. The corporations were often well connected politically and able to exert pressure on local leaders. A good portion of the film deals with a youth facility in Lake County, Michigan. The facility is for kids between 13-19. It was built as part of Governor John Engler's campaign to get tough on youth crime. The filmmakers also visited a for profit youth facility in Tullala, Louisiana. The facility was eventually turned over to the state after reports of beatings, and lack of food.

In addition to communities the film looks at the people who are part of the prison industry. There is a profile of CCA a Tennessee based company that can house 69,000 prisoners in 26 states. There are also scenes from the American Correctional Association convention where the latest prison gadgets are displayed. And the film notes that prisons are also a business for phone companies and food suppliers.

The analysis in Corrections comes from a number of activists, authors and academics. The most well known is probably Christian Parenti the author of Lockdown. Parenti traces the growth of prisons from the "tough on crime"

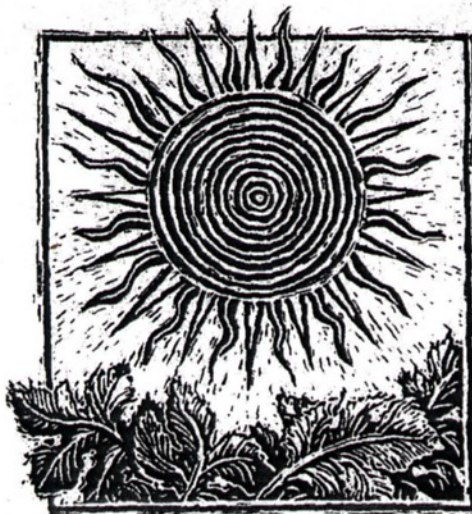
HopeDance

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